Lucas County

Pre-Implementation Planning and Preparation Plan

May 2002

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Executive Summary

Introduction Proposal

This document represents Acuent's Pre-Implementation Planning and Preparation Plan (PIP) for the implementation of PeopleSoft HRMS 8.3 and Financials 8.4 (ERP Systems). In this Document, we provide Lucas County with the information and tools necessary to plan and staff for the implementation of the ERP systems. We provide recommendations for the management of the project as well as recommendations for the hardware and infrastructure to support the PeopleSoft Internet Architecture.

Project Approach

Lucas County has purchased PeopleSoft's HRMS 8.3 and Financials 8.4 to provide a current state-of-the-art ERP system. To achieve these objectives, Acuent has worked very closely with Lucas County to provide advice and consultation services in support of pre-implementation planning and preparations needs. This was done by interviewing and meeting with key employees in the Payroll, Human Resource, Finance and Information Technology areas that will be affected.

Key Findings

The PIP includes numerous recommendations. These recommendations can be found in the sections and pages that follow the in PIP deliverable. Some of the more significant recommendations are:

Steering Committee – a steering committee needs to be established as soon as feasible. Decisions will soon need to be made regarding findings from the fit/gap and design phases of the project. The steering committee will act as the governing board and will meet to review progress, address resource/funding needs, major implementation issues and any changes scopes. The project team will be accountable to the Steering Committee.

Hardware Needs – The details of the hardware/infrastructure analysis are contained within, but the PeopleSoft Internet Architecture represents a significant change in operating platforms. Acuent has recommended and the County has purchased the minimum number of servers to provide a development environment. Outstanding PeopleSoft patches, fixes and tax upgrades have been applied against the installed PeopleSoft development environment to support the upcoming design and analysis phases of the Phase 1 8.3 HRMS implementation. The County still needs to finalize its hardware choice(s) and purchase and install the equipment needed for the HR and Financial production environment.

Training - The implementation and rollout of PeopleSoft represents a significant change in how Lucas County will conduct business. Team members will have to undergo (and are currently undergoing) significant training in order effectively participate in the implementation and ongoing ownership of the PeopleSoft applications. Acuent played a major role in this activity by identifying customized training curriculum to address the

initial HRMS 8.3 Phase 1 implementation as well as a supporting strategy for the following PeopleSoft 8.4 Financials for Phase 2. Acuent also worked closely with the Lucas County PeopleSoft Training Coordinator to launch the needed training effort.

Application Rollout – Lucas County has publicly stated its key goal of being able to issue checks on January 3, 2003 as a major milestone in the multi-phase PeopleSoft ERP implementation. In order to meet that need, Acuent has recommended an application rollout plan that will allow Lucas County to meet that goal. Acuent has identified those applications that will need to be implemented in the initial phase as will as additional phases and application implementation timelines.

Project Controls and Quality Assurance Procedures – Acuent has leveraged information contained in the Lucas County Strategic Implementation Plan (SIP) combined with client best practices to address the execution of the various implementation teams and supporting change management procedures. These techniques are designed to insure the effectiveness of the implementation phase and the ongoing integrity of the production environment. The configuration recommendations outlined in this portion of the PIP tie directly to recommendations provided in the hardware and software findings contained in the *PeopleSoft Technical Architecture Assessment* also contained in the final PIP document deliverable.

Data Conversion and External Interfaces – there will be minimal conversion and interfaces required as part of the implementation. The majority of the historical conversion will be manual, the exception being two benefits programs for HRMS. The financials applications will require manual loading of in process purchase orders and vouchers. The vendor file will require a program for the conversion. Regardless of the method used, Lucas County should take the opportunity to scrub the data, i.e.; delete duplicate or obsolete vendors, prior to the final production conversion.

Conclusion

Lucas County should be well prepared to begin the implementation of the Phase 1 applications. Part of the effort is currently underway with the ongoing Needs Analysis/Fit-Gap project. The county employees that were involved in the PIP phase were quickly made aware of the commitment needed to successfully implement the new ERP systems, and were willing and motivated to proceed to the next phase. Lucas County Management is equally committed and motivated in this endeavor. Lucas County has the tools, resources, and commitment to focus and succeed in the implementation challenge that it will soon face.

Establishment of a Steering Committee and Project Team

Deliverable

This document satisfies one of the key components of the Lucas County Pre-Implementation Planning and Preparations Scope document, dated February 2002, regarding the planned PeopleSoft Education & Government (E&G) 8.3 HR and 8.4 Financials implementation. This specific deliverable addressed the following:

> ***Establishment of a Steering Committee and Project Team*** **–** Acuent will make recommendations based on past client experiences and will work closely with Lucas County to determine the appropriate members for a high-level steering committee and the day-to-day implementation project team. Acuent will also collaborate with Lucas County on appropriate meeting schedules and operating procedures prior to the start of the implementation.

Activities

In order to provide this deliverable, Acuent completed the following activities:

- Completed a review of related information outlined in the Lucas County Strategic Implementation Plan (SIP), dated September 2001.
- Reviewed with Keith Fournier and Dan Bridge prior discussions between them regarding the overall organization of the executive leadership governing the Lucas County PeopleSoft E&G HR and Financials implementation.
- Conducted fact-gathering sessions with key HR, Payroll, and Financial representatives and specialists to identify and assess strong Lucas County candidates for the Project Functional Team Lead Team roles. Met with Dan Bridge and Bridgette Kabat to review and gain concurrence for the selected individuals.
- Verification with key implementation stakeholders that the recommended Project Team roles and candidates will meet Lucas County's needs.

Executive Leadership

Conversations with Keith Fournier and Dan Bridge, and supporting documentation in the Strategic Implementation document, highlighted previous decisions regarding the executive leadership approach for the Lucas County PeopleSoft E&G 8.0 HR and Financials Implementation. This approach involves Executive Sponsors, PeopleSoft Implementation Steering Committee, HR Project Manager, Financials Project Manager and supporting functional teams. The details surrounding each element of this tiered leadership approach are discussed below:

Executive Sponsors

The Executive Sponsors are the Lucas County Auditor and County Commissioners. These four individuals are:

- Lucas County Auditor — Larry Kaczala
- County Commissioner — Sandy Isenberg
- County Commissioner — Bill Copeland
- County Commissioner — Harry Barlos

The Executive Sponsors will stay abreast of implementation team progress through formal communications that are developed and distributed through the Steering Team. The implementation change management activity associated with the steering team will actually produce and distribute the communications update. In addition, there are direct reporting relationships that will also facilitate the flow of key information. Lastly, key updates to the County Commissioners will also address current progress and any major project issues.

Implementation Team Steering Committee

Reporting directly to the Executive Sponsors is the PeopleSoft Implementation Steering Team. The Steering Committee is comprised of the Lucas County Auditor, Administrator and key stakeholders representing functional and technical elements of the PeopleSoft Implementation. The main objectives of the Steering Team are to accomplish the following:

- Verify project team deliverables are being achieved as planned
- Address key issues that impact project deliverables
- Review and approve/disapprove project scope changes – especially additions or major modifications
- Publish and distribute timely information regarding each meeting

The steering committee is composed of key subset of ***voting*** members and other ***non-voting*** committee participants that will be involved with committee reviews and updates on an as need-be basis. The voting members will be equally balanced between representatives from the Commissioner's and Auditor's function of the county. In addition, to achieve the desired balance, one of the County Commissioner's needs to be involved on a dedicated basis. The current recommendation for this role is Sandy Isenberg.

The ***voting*** members of the steering committee are as follows:

- Lucas County Auditor — Larry Kaczala
- Lucas County Administrator — Ed Ciecka
- Information Services Director — Keith Fournier
- County Commissioner — Sandy Isenberg

The ***non-voting*** participating members of the steering committee are as follows:

• HR Project Manager	Dan Bridge
• HR Functional Leads	listed below
• Financial Project Manager	Bridgette Kabat
• Financial Functional Leads	listed below
• Technical Team Lead	Jim Baumgartner
• Change Management Specialist	Bill LeBoeuf
• Implementation Partner(s)	Clay Youngblood and/or Mark Wangeman

The Steering Committee will meet at least twice a month to review progress, address resource/funding needs, major implementation issues and any changes scopes. As the actual 'Go Live' date approaches for various phases of the implementation, the frequency of the Steering Committee meetings could increase to weekly, twice a week, or daily as appropriate. All Steering Team meetings should be announced in advance with sufficient time for all presenters to adequately prepare for the meeting. This announcement should contain the meeting agenda and individuals responsible for presenting the appropriate material. An example of an effective and proven steering committee agenda is as follows:

- Progress Against Planned Deliverables
- Overall Project Schedule Update
- Issues/Concerns
- Q& A (Questions and Answers)

Also, all additions and/or modifications to approved scope must be reviewed and approved by the Steering Committee. After each Steering Committee meeting a formal meeting minutes update will be distributed to all individuals involved in the implementation activity. These meeting minutes will detail: attendees, discussion involving key agenda items, any major decisions, the date/time of the next meeting and any other pertinent information.

HR Project Manager

The Implementation Team Project Manager will be Dan Bridge, the current Payroll Director. There is a possibility that the Project Director will be supported with an Assistant Project Director, but that position has not been filled yet. The benefits and responsibilities of the Assistant Projector Director will be focused on performing as much administrative assistant as possible to allow the Project Director more opportunity to focus on the HR implementation effort.

HR Functional Leads

Dan Bridge will be supported by Functional Team Leads that are the key focal points to three critical areas of the implementation: HR, Benefits, and Payroll. The processes and functions that these three teams will address are listed as follows:

HR	Payroll	Benefits
Applicant-to-Pay	Applicant-to-Pay	Open Enrollment
Contractors	Garnishments	
Demotion	Pay Cycle Processing	
New Hire	Payroll Reconciliation	
Performance Mgmt	Bonuses	
Promotion	Mileage (also Financial)	
Recruiting	Changes to Info	
Termination	Time & Attendance	
Transfer		
Reimbursements		
Changes to Info		
Time & Attendance		

The Functional Leads that will manage these activities and report directly to Dan Bridge with regards to scope, implementation approach, schedule, resources and other project related factors, are as follows:

- Human Resources Co-Lead — Phyllis Cole
- Human Resources Co-Lead — Betty Hutchinson
- Benefits Lead — Diane Ducey
- Payroll Co-Lead — Tami Graven
- Payroll Co-Lead — Dan Bridge
- HR Development Lead — Jim Volschow

Technical Team Lead

Jim Baumgartner will serve as the Technical Team Lead. Jim will report directly to Keith Fournier, but will also have "dotted line" responsibilities to the HR and Financials Project Managers. In addition to supporting technical PeopleSoft customization and programming needs, Jim will also have PeopleSoft related Web development and operational responsibility as well. Working with Jim on the Technical Team will be Jim Volschow, the HR Development Lead.

Financial Team Members

The implementation of PeopleSoft 8.4 Financials will be a four-phase effort. The current plan is for Phase 1 to begin in the fourth quarter of 2002. The Phase 2 activity is projected to begin the third quarter of 2003. As the Financials effort accelerates, the financial representatives will be added to the existing Implementation Steering Committee. The first two financial phases will deliver the following functionality:

Phase 1	Phase 2
General Ledger	Projects
Asset Management	Budgets
Purchasing	Treasury (to be determined)
Accounts Payable	

Financial Project Manager

The Financials Implementation Team Project Manager will be Bridgette Kabat, the current Budget Senior Analyst. There is a possibility that Bridgette will be supported with an Assistant Project Director, but that decision, as is the case with HR, has not been reached.

Financial Functional Leads

The Financials Functional Leads will report directly to Bridgette Kabat. The Functional Leads will be the focal point for their specific area of the 8.4 PeopleSoft Financials implementation with regards to the overall scope, implementation approach, schedule, resources and other project related factors. These functional leads, by phase are shown below:

Phase 1 Financials

• Purchasing Co-Lead	Jan Jump
• Purchasing Co-Lead	Lynn DiPierro
• Budgets Co-Lead	Kevin Helminski
• Budgets Co-Lead	Diana Minor
• GL/Assets Co-Lead	Scott Smith
• GL/Assets Co-Lead	Kelly Roberts
• AP Co-Lead	Tom Nichter
• AP Co-Lead	Bridgette Kabat
• Technical Support	tbd (Fournier)

In addition, to the Finance Functional Leads mentioned above, there will also be supporting involvement from key functional specialists with collective knowledge of both the Auditor's and the Commissioner's approach to Lucas County financial processes. These specialists are as follows:

• AP Specialist	Pat Hefferen
• Account Clerk III – Work Leader	Sandy Castellese

Phase 2 Financials

• Projects Lead	Bridgette Kabat
• Budgets Lead	Kelly Roberts
• Treasury Lead	Gina Hughes

Treasury Implications

Depending on the outcome of the Treasury functional assessment, which should begin the mid to later part of March 2002, Treasury functionality may also represent additional capability that needs to be factored into one of the PeopleSoft Financials release plan. To evaluate Treasury, existing processes will need to be understood, functionality needs identified, and a mini software evaluation conducted. While there is no guarantee that

PeopleSoft will provide the best fit, the current thinking is that with a large and growing number governmental agencies using PeopleSoft today the probability that PeopleSoft will be the selected alternative is very high.

Also, the inclusion of Treasury functionality could necessitate the addition of the Accounts Receivable (AR) module in conjunction with Billings capability. The only concern in this scenario is that the AR module was not purchased as part of the PeopleSoft 8.4 capability for Lucas County.

Application Rollout Plan

Deliverable

This document satisfies one of the key components of the Lucas County Pre-Implementation Planning and Preparations Scope document, dated February 2002, regarding the planned PeopleSoft Education & Government (E&G) 8.3 HR and 8.4 Financials implementation. This specific deliverable addressed the following:

> ***Application Rollout Plan*** **–** Acuent will assist Lucas County in identifying which functional modules will be implemented in each phase of the PeopleSoft implementation and determine the corresponding impact on legacy applications and other PeopleSoft related modules. Inputs from Lucas County regarding the overall plan for their legacy environment will be key information in support of this activity.

Activities

In order to provide this deliverable, Acuent completed the following activities:

- Conducted interviews with functional leads and experts to gain a better understanding of key elements in each of HR and Financial PeopleSoft 8.3 and 8.4 upgrades respectively. These individuals are as follows:

• Dan Bridge	Payroll
• Diane Ducey	Benefits Administration
• Judy Baker	Base Benefits
• Dan Bridge	Human Resources
• Marty Limmer	Finance
• Bridgette Kabat	Finance

- Developed a detailed matrix specifying all the HR elements in PeopleSoft 8.3. Confirmed with Dan Bridge whether each element was in scope for HR and what phase that capability would be delivered.

- Developed a functional map of the specific modules in PeopleSoft 8.4. Confirmed with Bridgette Kabat whether the module would be implemented and what Finance phase that implementation would take place.

- Prepared information for Keith Fournier regarding the PeopleSoft 8.x modules that Lucas County purchased and how those would be deployed to support his RFP development efforts.

PeopleSoft 8.3 HRMS

PeopleSoft 8.3 HRMS functionality will be implemented over a two-phase approach. These two releases are summarized as follows:

- Phase 1 Foundation functionality (Payroll/T&L, HR, and Benefits)
- Phase 2 eCommerce upgrade – Self-Service / Portal functionality

PeopleSoft Core HRMS Functionality

The matrix below contains the core functionality that is delivered with PeopleSoft's Human Resources module. This matrix will indicate those core elements that will be implemented at Lucas County during the PeopleSoft 8.3 HR implementation and which specific phase that implementation will occur:

Capability	Scope Y / N	Team Responsibility	Phase 1 / 2 / 3
Workforce Administration	Y	HR	1
Position Management	Y	HR	1
Recruit Workforce	Y	HR	2
Competency Management	Y	HR	2
Salary Planning	Y	HR	1
Total Compensation Reporting	Y	HR/Payroll	1
Absence Management	Y	HR/Payroll	2
Labor Relations	Y	HR	1
Base Benefits	Y	Benefits	1
Training Administration	Y	HR	1
Budget Training	Y	HR	2
Career Planning	Y	HR	2
Succession Planning	Y	HR	2
Variable Compensation	Y	HR / Payroll	2
Health & Safety	Y	Benefits/HR	1
Track International Assignments	N	N/A	N/A

PeopleSoft Self-Service

The following reference the Internet-based self-service modules that have been released with PeopleSoft's 8.0 HR upgrade. This particular matrix will reflect their status relative to the Lucas County PeopleSoft HR 8.3 implementation:

Module	Scope Y / N	Team Responsibility	Phase 1 / 2 / 3
ePay	Y	Payroll	2
eBenefits	Y	Benefits	2
eDevelopment	Y	HR	2
eRecruit eRecruit Manager	Y	HR	2
eCompensation eCompensation Manager	Y	HR/Payroll	2
eProfile eProfile Manager	Y	HR	2
eEquity	N	Not purchased	N/A

PeopleSoft HRMS Add-Ons

The following are additional add-on modules that are designed to supplement the PeopleSoft HR offering. This particular matrix will indicate which of those modules will be included in the Lucas County PeopleSoft HR 8.3 implementation and which specific phase that implementation will occur:

Module	Scope Y / N	Team Responsibility	Phase 1 / 2 / 3
Payroll	Y	Payroll	1
Payroll Interface	N	Not purchased	N/A
Time & Labor	Y	HR / Payroll	1
Benefits Administration	Y	Benefits	1
FSA Administration	N	Not purchased	N/A
Stock Administration	N	Not purchased	N/A
Pension Administration	N	Not purchased	N/A
General Ledger Interface	N	Not purchased	N/A
Government Portal	Y	HR Tech Devlp	2

HR Self-Service and Portal Rollout Strategy

The rollout strategy for the Self-Service modules and Portal capability will be to treat HR Phase 2 as an eCommerce upgrade. If time permits some of the self-service modules "**may**" be pulled back into Phase 1 given that this does not in any way jeopardize the major objective of being able to support Phase 1 Payroll (i.e., generate paychecks with PeopleSoft) on January 3, 2003!

Self-Service Modules

The general approach for deploying the self-service modules is highlighted below:

- Initially, provide the ability for employees to simply ***view*** key information (name, address, social security number, dependents, etc…)
- Follow the view-only phase with the capability to ***update*** some of the more basic information.

- Deploy the remaining, more ***complicated update features*** after it is apparent that the capability is understood and being utilized effectively.

Portal Capability

The approach for the Portal will follow a graduated deployment of capability very similar to the approach used for self-service. This is summarized as follows:

- Initially, deploy a ***common HR broadcast*** facility for all the HR professionals at Lucas County – key messages…
  - Payroll cycles and critical update cut-off dates
  - Regulatory changes
  - Recent county mandated changes
  - System availability
  - Regulatory changes
  - Key personnel updates, etc…
- Next, deploy capability that allows each HR professional to ***select Portal options*** that reflect their own personal preferences (without omitting the broadcast functionality)
- Lastly, provide capability that allows each HR professional to ***tailor*** their portal access to reflect links, external references and other capability that allows them to focus on their job-related activities.

Legacy/Mainframe Implications

After the successful installation of the Phase 1 PeopleSoft 8.3 HRMS capability there will be no need for the HP legacy mainframe from a Payroll/HR perspective. The only purpose it might serve is temporary repository for 2002 Payroll data. At some point in time the data will need to be moved to some other media as the HP mainframe support license expires in 2006 or is cancelled even before that date.

PeopleSoft 8.4 Financials / 8.3 Enterprise Performance Management

PeopleSoft 8.4 Financials and 8.3 Enterprise Performance Management (EPM) will be implemented over four (4) releases. These releases are characterized as follows:

- Phase 1 Fundamental financial capability (GL/ Assets, Purchasing/AP)
- Phase 2 Budgeting and Enhanced Financial Tracking
- Phase 3 eCommerce and Portal functionality
- Phase 4 Performance management and business modeling

The matrix shown below will detail what modules are scheduled for each of the 4 phases of the financial and enterprise performance management implementation at Lucas County:

Capability	Scope Y / N	Team Responsibility	Phase 1 / 2 / 3 / 4
General Ledger (GL)	Y	GL / Assets	1
Asset Management (AM)	Y	GL/Assets	1
Payables (AP)	Y	Purchasing / AP	1
Purchasing	Y	Purchasing	1
Projects	Y	Projects	2
Budget Planning	Y	Budgets	2
Treasury *	Y	Treasury / Billings	2
Billings *	Y	Treasury /Billings	2
Accounts Receivable (AR)*	Y	Treasury / Billings	2
eProcurement	Y	Purchasing / Tech Development	3
Enterprise Portal	Y	Tech Development	3
Balanced Scorecard	Y	to be determined	4
Business Analysis Modeler	Y	to be determined	4
Financials Warehouse	Y	to be determined	4
HRMS Warehouse	Y	to be determined	4
CRM Warehouse	?	to be determined	4
Supply Chain Warehouse	?	to be determined	4

* ***Note***: ***Treasury***, ***Accounts Receivable***, and ***Billings*** were not originally purchased as part of the Lucas County PeopleSoft 8.4 package. Since there may be a need to get monies received by the Treasury into the PeopleSoft GL, some combination of these modules **may be** a future requirement.

Legacy/Mainframe Implications

The primary legacy implication surrounds Treasury. Today, there are feeds from the Treasury function to the GL maintained on the HP mainframe. If for some reason the Treasury function at Lucas County can not be implemented in PeopleSoft or is not a reasonable approach, then there would need to be a need for a new interface between Treasury and PeopleSoft. This interface would load treasury data into the current GL being maintained in PeopleSoft versus the mainframe.

The second consideration involves the actual financial cutover for Phase 1, currently planned for July 1, 2003. Since the financial data for year 2003 (receipts, expenses encumbrances, etc.) will be found in both PeopleSoft **and** the legacy HP mainframe, any financial reporting or analysis for that specific year will need to extract data from both systems. Bridgette Kabat will verify with Scott Smith that this dual systems approach will support his ability to successfully complete the financial reporting (CAFR) for 2002. All 2003 financial data will be available with the implementation of PeopleSoft Phase 1 financial capability.

Hopefully, after 2003, there will be no need for the HP mainframe other than unique applications that are addressed by similar PeopleSoft functionality and possibility a temporary archive for data prior to 2003.

Project Control and Quality Assurance Procedures

Deliverable

This document satisfies one of the key components of the Lucas County Pre-Implementation Planning and Preparations Scope document, dated February 2002, regarding the planned PeopleSoft Education & Government (E&G) 8.3 HR and 8.4 Financials implementation. This specific deliverable addressed the following:

> ***Project Control and Quality Assurance Procedures*** **–** Acuent will work closely with Lucas County to define and develop a number of implementation team operating procedures including scope control, issue escalation, and data migration control. Acuent will leverage past client experiences to provide beneficial and effective project recommendations.

Activities

In order to provide this deliverable, Acuent completed the following activities:

- Completed a review of related information outlined in the Lucas County Strategic Implementation Plan (SIP), dated September 2001. A significant amount of information is covered by this document:
  - Procurement Plan
  - Scope Management Plan
  - Quality Management Plan
  - Change Management / Communication Plan
- Leveraged past client implementation experiences to augment information delivered in the SIP document noted above.
- Reviewed the document with Keith Fournier to obtain his feedback and suggestions.

Deliverable Approach

In developing this deliverable the following considerations were taken into account:

- Leverage the Strategic Implementation Plan (SIP), dated September 2001, and supplement where necessary to define the needed project control and quality assurance procedures and techniques
- Focus on a total ERP life-cycle perspective – not just implementation
- Leverage the experiences from past client implementations and upgrade projects
- Emphasize daily operations and upgrades as well

- Update migrations
- Daily Backups
- Development/Test/Training PeopleSoft instance refreshes

Project Team

The Program Manager and the supporting Acuent Implementation partners will have the responsibility of staying abreast of each functional team. This activity will involve both daily and weekly team meetings. This level of activity is very critical to guarantee that each team is well informed of new and evolving project developments, on schedule and within the agreed upon project scope. Other personnel, training and individual availability topics should also be discussed as appropriate. The fundamental concepts behind these meetings are to provide a continual flow of information and to treat both Lucas County and Acuent participants as one "blended" team focused on a successful implementation re! ***Communications***, ***teamwork*** and ***trust*** are the crucial elements that best guarantee an implementation project's success!

Daily Functional Team Meetings

Each working day the Functional Team Leaders will need to conduct a brief 10-15 minute meeting with their respective team members and supporting Acuent subject matter experts (SMEs) to discuss the following:

- Goals and objectives for today's activities
- Guarantee every team member knows what they should be addressing
- Any recent personnel availability developments and/or concerns
- Issues that will prevent team members them from accomplishing today's tasks
- Any other pertinent information

The Project Manager and the supporting Acuent Implementation partner(s) should plan on attending these daily meetings on a "rotating basis". This allows the opportunity for the Project management to address any project management issues that might arise during the daily meetings. Constant contact and on-going communications will help to keep each team motivated and on-track!

In addition, at the end of the week each team member should develop a brief, one-page maximum '*Weekly Status Report*'. These weekly reports should be maintained on a local share drive to allow the Project Manager access to this information on an as need-be basis. The status reports should contain 1-3 bullet points (typically 1-2 sentences max) summarizing the major information in the following categories:

- Key Accomplishments
- Next Week's Plans
- Major Issues and/or Concerns
- Hours contributed for the week towards team goals
- Other key miscellaneous inputs

Weekly Project Team Updates

On a weekly basis the Project Manager and the Acuent Implementation Partner(s) need to convene a weekly meeting to review the progress of each functional team involved in the current implementation phase. The functional team leads should attend these meetings only or a "stand in" if the designated team lead is not available for the meeting. These meetings should last for 30-45 minutes and should be facilitated by the current Project Manager and should always be announced ahead of time as to date, time and location. In addition the notification should contain a high-level meeting agenda. The key objective of this meeting is to accomplish the following:

- Determine progress against scheduled deliverables for each functional team
- Management updates regarding any new changes in approach or direction.
- Discuss any major issues preventing the accomplishment of scheduled deliverables
- Keep the Functional Leads well informed
- Open and honest forum to allow the "free exchange" of information critical to the implementation project.

Scope Control

Scope control is critical to the success of any major change activity such as the implementation of an ERP capability. It's a very tempting proposition to want to "simply add a little more functionality to make the product better." However, this activity must be controlled and confined to the agreed upon scope or the accumulative impact of all these "little additions" can take away serious amounts of needed resource to complete the needed scope of the implementation phase currently underway on time as planned. The Project Manager and the Acuent implementation partners must control this natural inclination and continually stress focus on the scope that supports the current implementation only!

The overall scope for entire implementation at Lucas County for both PeopleSoft 8.3 HR and 8.4 Financials is outlined in the SIP document under the 'Procurement Plan' chapter. As each phase is initiated the functional team leads in each area should confer with the Project Manager (Bridge, Kabat) to verify which requirements will be implemented during the current implementation project phase.

Test Scripts and Scope Verification

Each Functional Team Leader(s) will take the requirements s for their respective piece of the implementation and "break it down" into a series of processes and sub-processes that can be demonstrated during the 'Fit/Gap' analysis. To support this process focus a series of test scripts will be developed to document that the functionality and more importantly the scope, for a specific requirement has been accomplished. In addition, these test scripts should reflect Lucas County end-to-end business processes (or some appropriate subset) as much as possible. The test script is not considered complete until a Lucas County business representative (possibly the appropriate Team Lead) has given their approval and ***electronic sign-off***.

These test scripts should be captured electronically and placed on a share drive facility in a dedicated folder for each specific functional team to allow access to all implementation team members. These written scripts can be used repeatedly to verify that scope functionality is still place after various changes are made. Refer to ***Appendix A*** for a test script example. This particular example was "lifted" from the Lucas County SIP Document. The test scripts will also serve as an invaluable tool as system issues develop after/during production installation or subsequent upgrades. In addition, an electronic example of the script found in Appendix A will serve as a template for the Lucas County implementation team. This document electronic format, ***LC Test Script.doc*** will be available on the implementation share drive facility in a project standards management folder.

Lastly, these approved test scripts will also serve as the basis for a regression, stress and performance testing phases of the implementation effort. They are invaluable by products of the ERP implementation effort and should be valued for the knowledge transfer ("what we've learned about PeopleSoft") benefits they reflect and fit future testing and upgrade opportunities!

Issue Management

PeopleSoft functionality that does not conform to documented scope requirements constitutes an issue. Each issue needs to thoroughly documented and referenced as a unique '*Incident Report*'. This documentation is needed to provide project management the necessary visibility to allocate resources and track resolution progress and to allow the implementation team to address the issue. The document also contains accurate information and supporting screen shots to support the implementation team's efforts to recreate and resolve the originally encountered issue.

Each Incident Report needs to be maintained electronically on a the implementation team share drive facility and placed in the proper folders that contain all open and resolved Incident Reports. Please refer to '***Appendix C***' for an example of an Incident Report and the details involving the submission and documented resolution of the specific Incident Report issue. This particular example was taken from the Lucas County SIP Document, dated September 2001. In addition, an electronic copy of a blank Incident Report, '***LC Incident Report Form.doc***' will serve as a template for all implementation and production related problems and will be maintained in the project management standards folder residing on the implementation team share drive facility.

To provide Project Management, the Steering Committee and all implementation team members a quick view of all outstanding and resolved Incident Reports, an *'Incident Report Log*' needs to be provided and updated on a timely basis. This log will be available in electronic form on the implementation team share drive facility in a dedicated Incident Report Logs folder. To optimize the use of this log, all resolved issues should be noted uniquely and placed in a separate location at the bottom of the log. This allows a quick view of all outstanding Incident Reports and any updates regarding their status or potential resolution.

Please refer to '***Appendix B***' for the suggested Incident Report Log format, taken from the SIP document dated September 2001. A blank electronic copy of the Incident Report Log, '***LC Incident Report Log Form.doc'*** will server as a template for all implementation and post production Incident Report Logs. This electronic template will also be maintained in the project standards folder on implementation share drive facility.

As noted earlier, all Incident Reports need to be identified uniquely. An effective approach for uniquely identifying each issue is to label them by the functional area in which they occur in conjunction with the next appropriate issue number. For example, the seventh issue identified by implementation team and related to Payroll, would result in the identifier/name - '*LC_Payroll_007'*. In addition, the next available issue number is controlled by the individual tasked with maintaining the Incident Report Log. While subtle variations on this naming technique can be utilized, this general approach has worked well on past PeopleSoft implementations.

Minor Issues

The Incident Reports will identify issues of all magnitude. This may entail a cosmetic change to a report, a simple panel modification to add a new field needed by Lucas County, functionality gaps where required Lucas County functionality is missing or other examples to numerous to note here. A minor issue is one where the correction is relatively minor and its installation does not have any adverse impacts on any other functional areas in the implementation. Simply stated its impact is minor in scope, it is confined to one functional area of the implementation and it poses no major risk to the overall PeopleSoft implementation. In some cases, the issue will be such that Lucas County is willing to accept the issue and make corresponding changes in their internal process or identify necessary workarounds to circumvent the problem. The Project Manager working with their supporting Functional Team Lead(s) has the authority to approve the resolution to minor issues.

After completing all the supporting Incident Report documentation, the Project Manager, or his/her designee, will route the approved Incident Report document to all Functional Leads involved in the implementation. After the electronic sign-off is added, the Incident Report is moved to the "closed" Incident Reports folder on the implementation team share drive facility. A brief email identifying the closure of a minor Incident Report issue along with the supporting Incident Report document needs to be communicated to the implementation Steering Committee as well.

Major Issue Escalation

Major Incident Report issues by contrast represent problems which:

- Require significant implementation team resources to resolve,
- Add major implementation costs to the implementation,
- Affect multiple functional areas in the implementation,
- Have the potential to adversely impact or delay the PeopleSoft implementation, or
- Due to the difficulty in making process changes or exercising appropriate workaround(s), Lucas County business representatives cannot accept a process change or a workaround resolution.

The proposed resolution to a major issue must be reviewed by the Project Manager with the Steering Committee. The Project Manager will need to identify the pros/cons or several solution scenarios and allow the Steering Committee to make the best choice for Lucas County. This choice can easily add time, and costs to the implementation effort. After the proposed implementation is accepted or rejected, the corresponding Incident Report will be moved to the closed Incident Report folders on the implementation team share drive facility.

Customizations/PeopleSoft Supported Patches

All Incident Report issues that require a custom modification in order to successfully implement PeopleSoft must be thoroughly documented. This documentation needs to be placed in an implementation team folder specifically for modifications on the team's share drive facility and appropriately referenced in the associated Incident Report. This documentation is very critical. The application of new PeopleSoft upgrades essentially erases all customizations as part of the documented PeopleSoft upgrade process. Without the needed documentation, the ability to re-apply customizations from previous installations may be lost or seriously compromised, resulting in lost or incorrect functionality relative to the previous release. In some cases, PeopleSoft changes my eliminate the need for the customization or change the scope of the customization approach.

In addition, all PeopleSoft approved patches that are applied to the implementation or post production activity must also be documented in a dedicated "patches folder" on the implementation team's share drive facility. Since so many patches require prerequisites, knowing what patches have been applied is the only way to orderly mange the patches in place as well as install future PeopleSoft patch recommendations.

PS Maintenance Environments

There are five (5) PeopleSoft database instances (DMO / TRN / DEV / TST / PRD) that are needed to effectively support the implementation and subsequent support of a

specific PeopleSoft release such as PeopleSoft 8.3 HRMS or PeopleSoft 8.4 Financials. These 5 environments and their particular role are explained below.

DMO (Demo – Demonstration)

The DMO instance is used to maintain the "vanilla" (i.e., as delivered) installation that was originally installed by the PeopleSoft installation team when the specific implementation began, plus any additional PeopleSoft patches that have been applied to production. This instance should remain strictly PeopleSoft in scope and should ***not*** contain any client customizations or client-specific fixes.

The value of this database is that this is where the client (Lucas County in this case) will do their testing when they are attempting to demonstrate that there is a "bug" in the PeopleSoft delivered capability. In many cases, the PeopleSoft Connection will require the client to recreate their problem on this instance with the trace mechanism enabled. The trace reflecting the bug condition is transmitted to PeopleSoft Labs so that the problem can be recreated and evaluated in order to produce a PeopleSoft sanctioned resolution.

TRN (Training)

The TRN instance is used to support implementation team, end user and other client training needs. The instance will have a good representative subset of the clients configuration so that the training is targeted to their specific needs. In addition, the instance will contain all customizations and patches that have been applied to support the client's specific implementation. This is important in that the trainees see exactly what will be provided with the production release of the full implementation. The client's specific configuration data needs to be refreshed periodically on this instance (TRN) to keep it current and effective for ongoing training purposes.

DEV (Development)

The DEV instance will be used by the implementation team to build and unit test all foundation tables (HRMS), and control tables (Financials / Distribution) for this specific implementation. DEV will always be the primary instance for adding and changing foundation and control table values. In addition, all client specific development involving customizations, external interfaces, PeopleSoft objects (menu groups, menus, panel groups, panels, tables, etc...) and PeopleCode modifications will be developed and unit tested on this instance.

DEV is also used for "functional unit testing" to ensure that all the business requirements have been met. All functionality required by a specific implementation should be completely demonstrated on this instance. In addition, this is the instance to be used for "what if" test scenarios. All development and unit testing will be completed on the DEV instance.

TST (Test)

The TST instance will be used by the technical resources to develop and test data conversion programs. The business community will be responsible for data conversion validation and sign off as well as any required parallel testing activity. After the

PeopleSoft tables have successfully passed all unit testing activity on the DEV instance they will be migrated to the TST instance for final data validation along with the data conversion programs. Before the data validation activity begins all "dummy" data will be removed from the migrated tables by the execution of necessary data clean-up scripts.

After production 'Go Live' all changes will be validated on the TST instance. All migrations to production will come from this instance. Periodically, the TST environment will be refreshed with a copy of production to bring this instance up to date will all the transaction data that has been entered and processed in the production environment.

PRD (Production)

The PRD instance is the actual production instance. Development related changes will only be applied to this instance after they have been thoroughly and rigorously tested on the TST instance. After the business community validates a specific change, a request will be submitted and approved by the appropriate management representatives to migrate this update from TST to production.

Production Migrations

Effectively controlling production updates or migrations is a critical component in guaranteeing the stability and quality of the production environment. Like all major data centers this activity will need the same attention at Lucas County. All updates to production should originate from the TST environment and be packaged as PeopleSoft "projects" unless there are some compelling over-riding reasons why this approach is not acceptable.

The upgrade or fix starts with development work that is completed and successfully unit tested on DEV. In completing the unit testing, a representative sample of the existing test scripts should be utilized to verify that the change produces the desired results, but as important it has not created any "side effects" problems in other areas of the implementation. Given the nature of the change a small regression test involving test scripts from multiple functional areas may be needed to validate the change. In some cases, new capability will require that some of the effected test scripts will need to be upgraded to reflect the implemented change. As noted before, the test scripts should be maintained and kept current to provide the means to quickly and effectively test changes to the current system.

After the upgrade or fix has been validated on DEV and approved by the Technical Team Development Manager and the current Project Manager it is moved to TST for further testing and validation by the appropriate business representatives. The Functional Team Lead(s) will work with the business community representatives to assist them in their testing and to answer any questions that may be generated from the testing activity. After the business representative and the appropriate Functional Team Leader approve the change, this approval is documented in the supporting Incident Report and this approval is communicated electronically with the approved Incident Report attached to the correspondence. The approval acknowledgement needs to be transmitted to the implementation team and the Steering Committee and saved on the implementation team share drive facility as a closed issue/upgrade.

The actual production migration request will be submitted by the current Project Manager. This request will be sent to the Operations Manager for migration implementation. To ensure the integrity of the existing production instance the requested migration for TST to PRD for the update will be need to be implemented after hours while there are no active users on the production system. In addition, this migration should be preceded by the nightly backup of the existing production instance ***before*** the migration is installed. After the migration installation, the Operations Manager needs to send an email update to the Project Manager, the implementation team and the Steering Team indicating the planned upgrade was successfully migrated to production.

After the installation Operations needs to stay abreast of any negative feedback from disgruntled users or Hot-Line calls that indicate there may be a problems with the upgrade. If this is the case, the Operations Manager needs to contact the Project Manager immediately and determine if a production back-up is warranted. If a back-up is necessary, the Project Manager needs to send a brief email message to all production users, the implementation team and the Steering Committee indicating the time and duration of the required back out.

To facilitate effective and up to date testing, the DEV and TST instances need to be refreshed periodically with a copy of the production instance. This should occur on a monthly for bi-monthly basis to keep the DEV and TST instances up to date. Typically, this update occurs off-hours while no users are actually on either instance performing productive work. A good time to perform these refreshes is over a weekend or an extended holiday.

Appendix A

Lucas County ERP Implementation Project
Test Scripts

NEW HIRE/REHIRE TERMED OR CURRENT EMPLOYEE TEST SCRIPT					
System: HRMS/Financials	Module: Open Enrollment		Prepared By: xxx		Date:
Process: Reviewing and Entering Personal Information			Approved By:		Date:
Objective: Test Web Enrollment Functionality					
Assumptions: Select single Employee from Election Data Sets for testing purposes					
Task	Step	Step Description	Data Set	Expected Results	Actual Results
Navigate to Open Enrollment Function	1	In browser address line type in URL	Http://xxx.xxx	Sign On page appears	
	2	Enter user name, password and click “Sign On”	Employee ID from data set, password N/A	HR menu displays	
	3	Click “Open Enrollment” in Navigation Menu		“Welcome’ page displays	
	4	Click “Go to Wizard”		“Your Personal Information” page displays	
PERSONAL INFORMATION	1	Review personal data for single employee	Employee from Election Data Set		
	2	Click “edit personal information”		“Your Personal Information” page displays with edit boxes open.	

NEW HIRE/REHIRE TERMED OR CURRENT EMPLOYEE TEST SCRIPT					
System: HRMS/Financials	Module: Open Enrollment		Prepared By: xxx		Date:
Process: Reviewing and Entering Personal Information			Approved By:		Date:
Objective: Test Web Enrollment Functionality					
Assumptions: Select single Employee from Election Data Sets for testing purposes					
Task	Step	Step Description	Data Set	Expected Results	Actual Results
Update Name	1	Click in first name text box, delete name and click “Continue”		Dialog box ="first name cannot be blank"	
	2	Click OK, re-enter first name and tab out	Use correct first name	First name displays in text box	
	3	Click “Continue”		No alert message. “Your Personal Information” page displays. (***Note:*** A dialog box may appear is other required information has not been completed)	
	4	Click “edit personal information” button		“Your Personal Information” page displays with information entered	
	5	Click “Edit Personal Information”		“Your Personal Information” page displays with all information edit boxes open	
	6	Click in last name text box, delete name then click “Continue”		Dialog box = "last name cannot be blank"	
	7	Click OK, re-enter last name	Use correct last name	Last name displays (as entered) in text box.	
Update SSN	1	Highlight SSN field, enter new SSN and click “continue”	123456	SSN cannot be highlighted and changed	
Update Date of Birth	1	Select month from drop down list	April	Drop down list for days displays 30 days	
	2	Select new month	October	Days drop down list displays 31 days	

NEW HIRE/REHIRE TERMED OR CURRENT EMPLOYEE TEST SCRIPT					
System: HRMS/Financials		Module: Open Enrollment		Prepared By: xxx	Date:
Process: Reviewing and Entering Personal Information				Approved By:	Date:
Objective: Test Web Enrollment Functionality					
Assumptions: Select single Employee from Election Data Sets for testing purposes					
Task	Step	Step Description	Data Set	Expected Results	Actual Results
	3	Select new month and year	February 2000	Days drop down list displays 29 days	
	4	Select new month and year	February 1999	Days drop down list displays 28 days.	
	5	Enter 22 in days field		February 3 displays	
	6	Enter birth date and tab out	Use correct date of birth	Birth date displays	
Update Gender	1	Click in radio buttons for Male and Female		Highlighted radio buttons changes as each selection is made.	
	2	Select gender	Use correct gender	Radio button for current data highlighted	
Update marital status	1	Click in radio buttons for all marital statuses		Highlighted radio buttons changes as each selection is made.	
	2	Re-highlight original radio button	Use correct marital status	Radio button for current data highlighted	
Update Home Address	1	Click in Address 1 text box, highlight and delete. Click “Continue”		Dialog box = "Please enter your address"	
	2	Click OK, re-enter Address 1	Use correct address 1	Displays exactly as entered (even if not capitalized)	
	3	Click in Address 2 text box, highlight and delete. Click “continue”		“Your Personal Information” page displays or dialog box if other required information is missing.	

NEW HIRE/REHIRE TERMED OR CURRENT EMPLOYEE TEST SCRIPT					
System: HRMS/Financials	Module: Open Enrollment		Prepared By: xxx		Date:
Process: Reviewing and Entering Personal Information			Approved By:		Date:
Objective: Test Web Enrollment Functionality					
Assumptions: Select single Employee from Election Data Sets for testing purposes					
Task	Step	Step Description	Data Set	Expected Results	Actual Results
	4	Click "edit personal information"		"Your Personal Information" page displays with edit boxes.	
	5	Click in City, highlight and delete. Click "Continue"		Dialog box = "Please enter city"	
	6	Click OK, enter city and tab out	Use correct city	City appears as formatted	
	7	Highlight state text box and enter first letter of state	M	Displays Massachusetts	
	8	Re-enter letter	M	Displays Maryland	
	9	Use down arrow key on keypad to display state and tab	Missouri	Displays Missouri	
	10	Use the down arrow in text box to select and highlight correct state	see data set	Click down arrow key displays all states. Can scroll up and down to display correct state.	
	11	Highlight postal code text box, delete and click "continue"		Dialog box = "Please enter zip code"	
	12	Click OK, enter postal code and click "continue"	aaaaa	Dialog box = "Valid zip code is 5 digits"	
	13	Click OK, re-enter postal code and click "continue"	123	Dialog box = "Valid zip code is 5 digits"	
	14	Click OK, re-enter postal code and click "continue	1235-1234	Dialog box = "Valid zip code is 5 digits"	

NEW HIRE/REHIRE TERMED OR CURRENT EMPLOYEE TEST SCRIPT					
System: HRMS/Financials		Module: Open Enrollment		Prepared By: xxx	Date:
Process: Reviewing and Entering Personal Information				Approved By:	Date:
Objective: Test Web Enrollment Functionality					
Assumptions: Select single Employee from Election Data Sets for testing purposes					
Task	Step	Step Description	Data Set	Expected Results	Actual Results
	15	Click OK, re-enter postal code and tab out	see data set	Displays as “nnnnn” Cursor moves to Home Phone	
Update Access Information	1a	Enter Home Area code and click “continue” (delete if filled)	Aaa	Dialog box = “Invalid telephone number”	
	1b	Click OK and re-enter area code	1234	123 displays. Only 3 numbers can be entered.	
	1c	Click OK, re-enter area code and tab out		Data displays and cursor moves to Phone number field	
	1d	Enter Home telephone number and click “continue”	aaaa	Dialog box = “Invalid telephone number”	
	1e	Click OK, re-enter telephone number, click continue	1231231234	12312312 displays	
	1f	Click OK, re-enter telephone number	123 123	Dialog box = “Invalid telephone number”	
	1g	Click OK, re-enter Home telephone number and tab out	See data set (use dash)	Displays “nnn-nnnn”	
	2a	Enter Work Area code and click “continue”	Aaa	Dialog box = “Invalid telephone number”	
	2b	Click OK and re-enter area code	1234	123 displays. Only 3 numbers can be entered	
	2c	Click OK, re-enter area code and tab out		Data displays and cursor moves to Phone number field	
	2d	Enter Work telephone number and click “continue”	aaaa	Dialog box = “Invalid telephone number”	

NEW HIRE/REHIRE TERMED OR CURRENT EMPLOYEE TEST SCRIPT					
System: HRMS/Financials		Module: Open Enrollment		Prepared By: xxx	Date:
Process: Reviewing and Entering Personal Information				Approved By:	Date:
Objective: Test Web Enrollment Functionality					
Assumptions: Select single Employee from Election Data Sets for testing purposes					
Task	Step	Step Description	Data Set	Expected Results	Actual Results
	2e	Click OK, re-enter telephone number	1231231234	12312312 displays	
	2f	Click OK, re-enter telephone number	123 123	Dialog box = “Invalid telephone number”	
	2g	Click OK, re-enter Work telephone number and tab out	See data set (use dash)	Displays “nnn-nnnn”	
	3a	Click into email text box, enter email address and click “continue” (delete if filled)	tom jones	Dialog box =”Enter valid email address”	
	3b	Click OK, re-enter email address and click “continue”	Tomejones @	Dialog box =”Enter valid email address”	
	3c	Click OK, re-enter email address and click “continue”	Tomjones@ aol	Dialog box =”Enter valid email address”	
	3d	Click OK, re-enter email address and click “continue”	tomjones@ aol.com	“Your Personal Information” page displays	
	3e	Click “continue”		“Your Dependents/Beneficiaries” page displays	

Appendix B

Lucas County ERP Implementation Project
Incident Reports Log

Status Codes 1—Showstopper
2—Can't continue to next day of scheduled testing
3—Can continue testing with workaround but resolution is needed before production
4—Can continue to production with a workaround

Status	Tester Name	Priority	Function	Raised	Description	Resolution	DB	Res. Type	Target	Assigned	Date Res.

Appendix C

Lucas County ERP Implementation Project
Incident Reports

Incident Report Form
Present and discuss at all status meetings during testing and production support. This is a tool to report, record, and track issues encountered during testing and production.

1) ID:	2) Status: Refer to Incident Procedures for definitions ☐ Open ☐ Closed
3) Tester Name (Name & Work Contact Number):	4) Priority: Refer to Incident Procedures for definitions ☐ 1 = Critical ☐ 2 = High ☐ 3 = Medium ☐ 4 = Low
5) Function (HR, Benefits, Payroll, etc.)	6) Raised:
7) Description:	
8) Resolution:	
9) Database Name: TRN DEV TST PRD	
10) Resolution Type (Business Process/System/Training):	
11) Target Date: Date by which the incident should be resolved	12) Assigned: Name of person who is assigned to get resolution
13) Date Resolved:	14) Print Screen Attached: ☐ YES ☐ NO
15) Re-Test:	

Incident Report Procedures

Shown below are the explanations and procedure needed to complete an Incident Report form. An editable version of these procedures will also be added to the project management standards folder on the Lucas County PeopleSoft implementation share drive facility. The supporting Microsoft Word document will be titled - "LC Incident Report Tracking Procedures.doc."

Field	Explanation	Responsibility
ID:	Assigned by Test Lead at time of incident and used for tracking on the incident log.	Test Lead
Status:	Status of Incident: Open or Closed	Tester and Approver
Tester Name:	Name & Work Contact Phone Number of Tester	Tester
Priority:	This what the tester & Test Lead agree upon. 1 = Showstopper 2 = Can't continue to next day of scheduled testing 3 = Can continue testing with workaround, but resolution is needed before beginning production 4 = Can continue to production with a workaround 1 = Showstopper Examples: Abnormal end of tasks. Application causes abnormal termination of concurrently running applications. Performance degradation. Data integrity is in jeopardy. Testing cannot continue until the problem is fixed (no workaround). 2 = Can't continue to next day of scheduled testing Examples: The application has demonstrated a severe failure preventing use of certain functions Testing of an area cannot continue without a workaround. 3 = Can continue testing with workaround but resolution is needed before cutover to production Examples: The application has demonstrated a minor failure preventing use of certain functions, and a testing workaround is available. The incident prevents system functionality from executing correctly. 4 = Can cutover to production with a workaround Examples: The function demonstrated a minor failure, but is not required for a successful operation of the system. The functionality is not required until after the system is live.	Tester and Test Lead

Field	Explanation	Responsibility
Function:	Enter the module in which the error occurred—HR, Benefits, Payroll, GL, Purchasing, AP, AR, Assets, etc..)	Tester
Raised:	Enter the date that the error occurred.	Tester
Description:	The complete scenario of events. All Steps performed All Panels opened All Command menu items chosen All Error and Warning Messages received (COPY MESSAGES ***EXACTLY*** THE WAY THEY APPEAR—IF POSSIBLE, PROVIDE ***SCREEN SHOTS*** WHEN POSSIBLE.)	Tester
Resolution:	COMPLETED BY RESOURCE(S) ASSIGNED BY TEST LEAD. The General Fix to the problem/incident. Usually the steps taken by the Technical Staff to fix problem.	Technical Resource
Database Name:	The Database where the problem was discovered: A = DEV (Development) B = TST (Test) C = PRD (Production) D = TRN (Training)	Tester or Test Lead
Resolution Type:	Input the type of resolution—Business Process Change, Business Workaround, System, Training	Test Lead
Target Date:	Date by which the incident should be resolved	Test Lead
12) Assigned:	Name of the person who is assigned to get resolution	Test Lead
Date Resolved:	The date the incident was resolved	Test Lead
Print Screen Attached:	Check one of the boxes indicating if there is a print screen attached—Yes or No	Tester
Re-Test:	Indicate what happened in the re-test	Test Lead

Training Coordination

Deliverable

This document satisfies one of the key components of the Lucas County Pre-Implementation Planning and Preparations Scope document, dated February 2002, regarding the planned PeopleSoft Education & Government (E&G) 8.3 HR and 8.4 Financials implementation. This specific deliverable addressed the following:

> ***Training Coordination*** **–** Acuent will provide recommended training plans for project team members based on inputs from Lucas County defining needed job roles and target team members. During the actual project implementation, Lucas County will need to have training coordination resource(s) in place to verify that all required training is taken as planned. All Lucas County required training, needs to be completed prior to the start of the implementation project.

Activities

In order to provide this deliverable, Acuent completed the following activities:

- Completed a review of related organizational and training information outlined in the Lucas County Strategic Implementation Plan (SIP), dated September 2001.
- Collected recommendations regarding core and specialty PeopleSoft training classes from Acuent and PeopleSoft training specialists for various team roles that are associated with HR, Financials, and Technical implementation efforts. See *Appendix A*, *Appendix B*, and *Appendix C* for more details regarding team roles and core versus specialty PeopleSoft classes in each functional area.
- Met with Dan Bridge and Jim Baumgarten to identify key implementation team members and associated training needs.
- Reviewed suggested training strategies and course recommendations with Dan Bridge and Jim Baumgarten to obtain their agreement regarding the recommended training strategy and approach.
- Developed a high-level training strategy for the Financials implementation and reviewed it with Bridge Kabat.
- Worked with Dan Bridge to emphasize the need for and to identify a Lucas County PeopleSoft Training Coordinator – Sandy Castellese. Worked with Sandy to help get the training coordination effort underway.

HR Training Approach

The HR training strategy will accomplish the following objectives:

- All HR Implementation Team members will take both the '*Introduction to PeopleSoft 8.0 HRMS*' and the first '*Human Resources'* classes. These two classes will be taken as Instructor Lead Training (ILT) to gain the critical hands-on experience to enhance the first exposure to PeopleSoft for the Lucas County HR implementation team. In addition, these two classes will be scheduled as a 3-day "block" to further enforce the initial PeopleSoft experience. These classes account for 3 PeopleSoft training units per team member. The prior training for Dan Bridge, and Acuent representatives will be omitted from this focus. The HR Implementation Team members are as follows:

Individual	Department / Group
• Jim Baumgartner	Data Processing / Info Services
• Karen Peck	Data Processing / Info Services
• Jim Volschow	Data Processing / Info Services
• Diane Ducey	Risk Management (Benefits)
• Judy Baker	Risk Management (Benefits)
• Dan Bridge	Payroll - Auditor's Dept.
• Tami Graven	Payroll - Auditor's Dept.
• Phyllis Cole	HR for Common Pleas Court
• Sheilia Daum	HR for Children Services Board
• Gwen Moore	Director of HR – Commissioner's
• Megan Hupp	HR Manager - Commissioners
• Betty Hutchinson	Juvenille Court
• Ardith Willman	Board of Mental Retardation (BMR)
• Bridgette Kabat	Office of Mgmt./Budgets - Commissioner's
• Kelly Roberts	Office of Mgmt./Budgets - Commissioner's

Note:

1. Board of Mental Retardation (BMR) and Mental Retardation Development Disabilities (MRDD) are the same group.
2. Children's Services Board (CSB) and Lucas County Children's Services (LCCS) are also the same group.

- HR Functional Team Leads will take additional PeopleSoft training classes to guarantee that they cover the full spectrum of PeopleSoft raining needs in their respective subject matter area (i.e., Core Human Resources, Benefits, Payroll and Technical/Development needs).

  - Betty Hutchinson and Phyllis Cole will collectively cover the core and specialty courses for Human Resources

  - Diane Ducey and Judy Baker will address Benefits and Benefits Administration

  - Dan Bridge and Tami Graven will concentrate on Payroll

- Jim Volschow, also a member of the Technical Implementation Team, will focus on PeopleSoft HR development and technical needs. Jim will serve as the HR Development Lead.

- For each of the HR functional areas there will be a primary and a secondary individual that will focus on the appropriate training and obtaining the needed PeopleSoft expertise.

    - Payroll — Dan Bridge / Tami Graven
    - HR — Phyllis Cole / Betty Hutchinson
    - Benefits — Diane Ducey / Judy Baker

- Special training needs were also identified for Dan Bridge (Payroll) and Jim Volschow (HR Technical Development Lead).

- PeopleSoft Webcasts and 'Training Kits' may also serve, as economical ways to provide additional Implementation Team training as needed to reach individuals or group classes. These needs will be appraised on an as-need-be basis during the actual implementation. While the Webcasts will not satisfy prerequisites for PeopleSoft training, they are a way to get needed training in a timely fashion without travel related expenses. This is especially applies to individuals who already have a good grasp of PeopleSoft and just want additional exposure in a new subject area.

Dan Bridge and his Functional Team Leads will then serve as critical subject matter experts and will be able to provide "train-the-trainer" support for other HR team members as they progress through the in the HR implementation project. Additional training needs may also evolve as team members see the need for additional subject matter expertise or re-alignment takes place due to team turnover.

User training classes will be scheduled and conducted as close to the PeopleSoft HR 8.3 implementation as possible. PeopleSoft recommends that this be completed no sooner than 7 weeks prior to the actual PeopleSoft 8.3 HR implementation cutover.

The recommended PeopleSoft training classes for the HR Implementation Team are outlined below. This addresses training that will be completed during the ***life*** of the implementation. Those courses that need to be completed ***before*** the beginning of the implementation are noted in blue italics with a *'(R)*' following the class name.

Lucas County HR Training Matrix

	Units	Bridge	Graven	Cole	Hutchinson	Ducey	Baker	*Volschow*
Functional Classes								
Intro to PeopleSoft HRMS (R)	1	*0*	*1*	*1*	*1*	*1*	*1*	*1*
Human Resources (R)	2	*0*	*2*	*2*	*2*	*2*	*2*	*2*
Career Succession Planning	1			1				
Competency Management	1			1				
Training Administration	1				1			
Recruit Workforce	1				1			
Variable Compensation	1				1			
Position Management	1			1				
Base Benefits (R)	2	*0*				*2*	*2*	
Benefits Administration (R)	5					*5*	*5*	
Payroll I (R)	5	*0*	*5*					*5*
Payroll II	2	2	2					
Year End Payroll	1	1	1					
Time and Labor (R)	4	*4*	*4*		*4*			
Query/Crystal for HRMS	2	2	2	2	2	2	2	
Technical Classes								
PeopleTools I (R)	5	*5*						*5*
PeopleTools II (R)	5							*5*
People Code	5							5
Application Engine	4							4
SQR I (R)	4							*4*
SQR II	6							6
Query/Crystal Power Combo	4							4
Data Management Tools (R)	3							*3*
Total Units =		14	17	8	12	12	12	*44*
Team Lead Total =		75						
Other Team Member Total =		18						
Grand Total # Units =		***93***						

Dan Bridge =	HR Project Manager / Payroll
Phyllis Cole =	Human Resources
Betty Hutchinson =	Human Resources
Diane Ducey =	Benefits
Tami Graven =	Payroll
Jim Volschow =	HR Development Lead *(unit count not included)*
(R) =	Required ***before*** implementation begins

Technical Training Approach

The Technical Team training strategy will focus, on a case-by-case basis, on the necessary PeopleSoft skills that will be required for the roles that comprise the PeopleSoft Technical Team. In addition, all Implementation Team members will take the '*Introduction to PeopleSoft 8.0 HRMS*' to gain a basic appreciation of PeopleSoft navigation and an overview of HRMS delivered capability. These roles and their associated strategy are outlined as follows:

Team Lead (Jim Baumgartner)

- Develop sufficient skills to support the HR development activity
- Gain an appreciation for the administration and operations aspects of a PeopleSoft Internet environment.
- Understand standard PeopleSoft change management techniques

HR Development (Jim Volschow / Karen Peck)

- Development comprehensive PeopleSoft Internet development skills
- Understand PeopleSoft database structures and change management
- HR Development Lead will also pursue functional training as appropriate
- Operations and DBA Support (JP Lagger)
- Develop server administration and DBA skills
- Understand standard PeopleSoft change management techniques
- Security and upgrade approaches are also a focus
- Support the development of PeopleSoft DBA and System Administration skills for Chris Zimo and Eric Zatko, and possibly others)

Web Development (Gary Kleinfelter)

- Develop sufficient skills to support the HR Internet self-service environment
- Understand PeopleSoft portal architecture and capability
- Understand the pre-packaged portal content builder that PeopleSoft releases with the bundled Enterprise and Government portal capability.

The recommended PeopleSoft training classes for the Technical Implementation Team is outlined below. This addresses training that will be completed during the total ***life*** of the implementation. Those courses that need to be completed prior to the beginning of the implementation are noted in blue italics with a *'(R)*' following the class name. There are two exceptions to the "R rule" – the Technical Team Lead and the HR Development Lead can take the 'Data Management Tools' class as appropriate, not necessarily before the implementation begins.

Lucas County Technical Training Matrix

	Units	Tech Lead	DBA / Ops	Web Dev	HR Lead	Dev
Functional Classes						
Intro to PeopleSoft HRMS (R)	1	*1*		*1*	*1*	*1*
Human Resources (R)	2	*2*			*2*	*2*
Payroll I (R)					*5*	
Technical Classes						
PeopleTools I (R) - 8.12	5	*5*	*5*		*5*	*5*
PeopleTools II (R) - 8.12	5	*5*	*5*		*5*	*5*
People Code - 8.12	5				5	5
PeopleSoft Security	3		3			
Application Engine	4				4	
SQR I (R) - 8.12	4	*4*			*4*	*4*
SQR II - 8.12	6				6	6
Query/Crystal Power Combo - 8.12	4				4	
PeopleSoft Server Administration (R) - 8.12	4		*4*			
Data Management Tools (R) - 8.12	3	*3*	3		3	
Database Upgrade - 8.12	2		2			
Process Scheduler	2		2			
Portal Solutions	2			2		
Total Units =		20	24	3	44	28
Grand Total # Units =		***119***				

Baumgartner = Technical Team Lead
JP Lagger = DBAs and Operations
Gary Kleinfelter = Web Development
Jim Volschow = HR Development Lead
Karen Peck = HR Development

(R) = Required ***before*** implementation begins

PeopleTools 8.4 Special Considerations

- A major upgrade planned for October, 2002 will provide a new PeopleTools 8.4 capability.
- A “delta” class will be available in the October, 2002 time frame for:
  1. PeopleTools I/II 8.12 – 8.4
  2. PeopleCode 8.12 – 8.4
- PeopleSoft 8.3 HRMS development environment will be developed using resources trained in the **8.12 technology**.
- The delta 8.12-to-8.4 classes will typically be a 6-8 hour tutorial that can be easily be loaded to the individuals workstation to allow them to comprehend the new features 8.4 provides.
- Major training changes that are being planned for PeopleTools 8.4 are as follows:
  - Major re-focus on training

- SQR I/II, which under 8.12 involves a 4-unit and a 6-unit session, will be "collapsed into a new SQR I class that requires 5 units of training. Again, this will not be available until October 2002.

- No Application Engine 8.12 – 8.4 Delta class

Financials Training Strategy

The Financial training strategy will take the same basic approach as outlined by the *HR Training Strategy* section documented above. This strategy will accomplish the following objectives:

- All Financial Implementation Team members will take the '*Introduction to PeopleSoft 8.0 for Financials/SCM/EPM'* class.

- Finance Functional Team Leads will take additional PeopleSoft training classes to guarantee that they cover the full spectrum of PeopleSoft training needs in their respective subject matter area (i.e., General Ledger, Accounts Payable, Purchasing, Budgets, and Projects)

  - Scott Smith and Kelly Roberts will collectively cover the core and specialty courses for General Ledger and Asset Management.

  - Jan Jump and Lynn DiPierro will focus on all aspects of Purchasing

  - Tom Nichter and Bridgette Kabat concentrate on aspects of Accounts Payable

  - During Phase 2 of the Financials Implementation, Bridgette Kabat and Kelly Roberts will focus on Budgeting and Projects respectively.

- For each of the HR functional areas there will be a primary and a secondary individual that will focus on the appropriate training and obtaining the needed PeopleSoft expertise.

- PeopleSoft Webcasts and 'Training Kits' may also serve as economical ways to provide additional Implementation Team training as needed to reach individuals or group classes. These needs will be appraised on an as-need-be basis during the actual implementation. While the Webcasts will not satisfy prerequisites for PeopleSoft training, they are a way to get needed training in a timely fashion without travel related expenses. This is especially true of individuals who already have a good grasp of PeopleSoft and just want additional exposure.

Bridgette Kabat and her Functional Team Leads will then serve as critical subject matter experts and will be able to provide "train-the-trainer" support for other Finance team members as they progress through both phases of the Finance 8.4 implementation project. Additional training needs may also evolve as team members see the need for additional subject matter expertise or re-alignment takes place due to team turnover.

User training classes will be scheduled and conducted as close to the PeopleSoft 8.4 Financials implementation as possible. PeopleSoft recommends that this be completed no sooner than 7 weeks prior to the actual implementation cutover.

After the Finance Implementation Team is formalized and the implementation "journey" begins, the above training focus may be augmented with additional team members, as they become actively involved in the two-implementation phases.

Project Management Basics

In addition to the training referenced above, all Lucas County PeopleSoft Implementation Team members will take a half-day session on project management fundamentals. The focus of this training is to discuss project management basics and common terminology that all team members will experience during the PeopleSoft implementation. By taking this class all involved will have a "common baseline" understanding of how the project will be managed and what they can expect. The specific training will either be obtained through local college or university sources or Acuent will develop and provide the training.

Appendix A

PeopleSoft HRMS Training Classes

Overview

The following details PeopleSoft training that will be applicable to the Lucas County PeopleSoft 8.3 HR implementation. All classes ***require*** an ability to navigate an Internet Browser, understanding of a Relational Database and working knowledge of MS Windows.

Training Class Specifics:

- Classes are listed in the order in which they need to be taken (prerequisite-wise).
- Classes are approx. $525 per unit.
- Core classes in normal print – *conditions in italics*
- Specialty classes in **Bold** print – *conditions in italics*

HRMS Functional Lead

Intro to PeopleSoft for HRMS - *(1 Day/1 Unit)*
Human Resources - (2 Days/2 Units) – *must have Intro to take this course*
Base Benefits - (2 Days/2 Units) – *must have Human Resources to take this course*

Query/Crystal for HRMS - (*2 Days/2 Units) – no prerequisites*
PeopleTools I - *(5 Days/5 Units) – no prerequisites*

Human Resource Application Specialist

Intro to PeopleSoft for HRMS - *(1 Day/1 Unit)*
Human Resources - *(2 Days/2 Units) – must have Intro to take this course*

Career Succession Planning - *(1 Day/1 Unit)*
Competency Management - *(1 Day/1 Unit)*
Training Administration - *(1 Day/1 Unit)*
Recruit Workforce - *(1 Day/1 Unit)*
Variable Compensation - *(1 Day/1 Unit)*

*These classes can be taken after completing Intro to PS for HRMS **OR** Human Resources.*

Position Management - *(1 Day/1 Unit) – must have Human Resources to take this course*
Query/Crystal for HRMS - *(2 Days/2 Units) – no prerequisites*
PeopleTools I - *(5 Days/5 Units) – no prerequisites*

Base Benefits Application Specialist

Intro to PeopleSoft for HRMS - *(1 Day/1 Unit)*
Human Resources - *(2 Days/2 Units) – must have Intro to take this course*
Base Benefits - *(2 Days/2 Units) – must have Human Resources to take this course*
Payroll I - *(5 Days/5 Units) - must have Base Benefits to take this course*

Query/Crystal for HRMS - *(2 Days/2 Units) – no prerequisites*
PeopleTools I - *(5 Days/5 Units) – no prerequisites*

Benefits Administration Application Specialist
Intro to PeopleSoft for HRMS - *(1 Day/1 Unit)*
Human Resources - *(2 Days/2 Units) – must have Intro to take this course*
Base Benefits - *(2 Days/2 Units) – must have Human Resources to take this course*
Benefits Administration - *(5 Days/5 Units) – must have Base Benefits to take this course*

Payroll I - (5 Days/5 Units) – must have Base Benefits to take this course
Query/Crystal for HRMS - (2 Days/2 Units) – no prerequisites
PeopleTools I - (5 Days/5 Units) – no prerequisites

Payroll Application Specialist
Intro to PeopleSoft for HRMS - *(1 Day/1 Unit)*
Human Resources - *(2 Days/2 Units) – must have Intro to take this course*
Base Benefits - *(2 Days/2 Units) – must have Human Resources to take this course*
Payroll I - *(5 Days/5 Units) – must have Base Benefits to take this course*
Payroll II - *(2 Days/2 Units) – must have Payroll1 to take this course*
Year End Payroll - *(1 Day/1 Unit) – Payroll I & II are strongly recommended, although not required*

Query/Crystal for HRMS - *(2 Days/2 units) – no prerequisites*
PeopleTools I - *(5 Days/5 units) – no prerequisites*

Payroll Interface Application Specialist
Intro to PeopleSoft for HRMS - *(1 Day/1 Unit)*
Human Resources - *(2 Days/2 Units) - must have Intro to take this course*
Base Benefits - *(2 Days/2 Units) - must have Human Resources to take this course*
Payroll Interface - *(3 Days/3 Units) – must have Base Benefits to take this course*

Query/Crystal for HRMS - *(2 Days/2 Units) – no prerequisites*
PeopleTools I - *(5 Days/5 Units) – no prerequisites*

Time and Labor Application Specialist
Intro to PeopleSoft for HRMS - *(1 Day/1 Unit)*
Human Resources - *(2 Days/2 Units) - must have Intro to take this course*
Time and Labor - *(4 Days/4 Units) – must have Human Resources to take this course*

Payroll I - *(5 Days/5Uunits) – must have Base Benefits to take this course*
Payroll Interface - *(3 Days/3 Units) – must have Base Benefits to take this course*
Query/Crystal for HRMS - *(2 Days/2 Units) – no prerequisites*
PeopleTools I - *(5 Days/5 Units) – no prerequisites*

Pension Application Specialist
Intro to PeopleSoft for HRMS - *(1 Day/1 Unit)*
Human Resources - *(2 Days/2 Units) – must have Intro to take this course*
Pension - *(5 Days/5 Units) – must have Human Resources to take this course*
Administering PeopleSoft Pension *(2 Days/2 Units) – must have Human Resources to take this course*

Query/Crystal for HRMS - *(2 Days/2 Units) – no prerequisites*
PeopleTools I - *(5 Days/5 Units) – no prerequisites*

Stock Administration Application Specialist
Intro to PeopleSoft for HRMS - *(1 Day/1Uunit)*
Human Resources - *(2 Days/2 Units) – need Intro to take this course*
Stock Administration - *(2 Days/2 Units) – need Human Resources to take this course*

Query/Crystal for HRMS - *(2 Days/2 Units) – no prerequisites*
PeopleTools I - *(5 Days/5 units) – no prerequisites*

Webcasts

Webcasts can be taken in addition to any of the above-mentioned classes. They ***DO NOT*** satisfy prerequisites for any HRMS Application classes.

Human Resources Overview – *6 Hrs./1 Unit – no prerequisites*
Intro to PeopleSoft for HRMS – *7 Hrs/1 Unit – no prerequisites*
Payroll Overview – *6 Hrs/1 Unit – no prerequisites*
HRMS Workflow Overview – *3 Hrs/0.5 Units – no prerequisites*
HRMS Security Overview – *7 Hrs/1 Unit – no prerequisites*

Career/Succession Planning – *1 Day/1 Unit – must have Intro to PeopleSoft for HRMS to take this course*
Competency Management – *1 Day/1 Unit – must have Intro to PeopleSoft for HRMS to take this course*
Payroll II – *2 Days/2 Units – must have Payroll I to take this course*
Planning Compensation - *2 Days/2 Units – no prerequisites*
Position Management – *1 Day/ 1 Unit – must have Human Resources to take this course*
Recruit Workforce - *1 Day/1 Unit – must have Intro to PeopleSoft for HRMS to take this course*
Training Administration – *1 Day/ 1 Unit – must have Intro to PeopleSoft for HRMS to take this course*
Variable Compensation – *1 Day/1 Unit – must have Intro to PeopleSoft for HRMS to take this course*
Year End Payroll – *7 Hrs./1 Unit – no prerequisites*
Stock Administration – *2 Days/2 Units – must have Human Resources to take this course*

Appendix B

PeopleSoft Technical Training Classes

Overview

The following details PeopleSoft training that will be applicable to the Lucas County PeopleSoft 8.0 HR and Financials implementation. All classes ***require*** an ability to navigate an Internet Browser, understanding of a Relational Database and working knowledge of MS Windows.

Training Class Specifics

- Classes are listed in the order in which they need to be taken (prerequisite-wise).
- Classes are approx. $525 per unit.
- Core classes in normal print – *conditions in italics*
- Specialty classes in **Bold** print - *conditions in italics*

Technical Lead

PeopleTools I - *(5 Days/5 Units) – no prerequisites*
PeopleTools II - *(5 Days/5 Units) – must have PeopleTools I; SQL knowledge recommended*
Query Reporting **-** *(2 Days/2 Units) – no prerequisites*
Integration Tools - *(4 Days/4 Units) – must have PeopleTools II*

PeopleSoft Security - *(3 Days/3 Units) – must have PeopleTools I; Data Mgmt Tools recommended; SQL and Network Security encouraged*
Application classes as needed

Programmer Analyst

PeopleTools I **-** *(5 Days/5 Units) – no prerequisites*
PeopleTools II - *(5 Days/5 Units) – must have PeopleTools I; SQL knowledge recommended*
PeopleCode - *(5 Days/5 Units) – must have PeopleTools II*
Integration Tools - *(4 Days/4 Units) – must have PeopleTools II*

PeopleSoft Security - *(3 Days/3 Units)– must have PeopleTools I; Data Mgmt Tools recommended; SQL and Network Security encouraged*.
Business Process Design - *(4 Days/4 Units) – must have PeopleTools II; PeopleCode & Intro to Query recommended*
Portal Solutions - *(2 Days/2 Units) – must have PeopleTools I; familiarity with Web Interface programming technologies is helpful, but not required*.
Application Engine - *(4 Days/4 Units) – must have PeopleTools II; PeopleCode recommended, not required*.
SQR I - *(4 Days/4 Units) – must have PeopleTools I; knowledge of relational DB concepts; working knowledge of some 3GL language (COBOL, C)*
SQR II - *(4 Days/6 Units) – must have SQR I; working knowledge of SQR attained in business environment strongly recommended.*
Query/Crystal Power Combo - *(4 Days/4 Units) – no prerequisites*

Data Management Tools - *(3 Days/3 Units) – must have PeopleTools I; knowledge of PeopleSoft system and other components such as RDBMS & maintenance utilities are recommended*
PeopleSoft Database Upgrade - *(2 Days/2 Units) – must have Data Management Tools; knowledge of PeopleSoft system and other components such as RDBMS & maintenance utilities are recommended*

DBA
PeopleSoft Server Administration - *(4 Days/4 Units) – no prerequisites; completion of the PeopleTools I development course for the PeopleSoft 8 environment is strongly recommended. Some familiarity with operating systems or RDBMSs will be useful. Completion of any other PeopleSoft Technical class can be helpful*
PeopleTools I - *(5 Days/5 Units) – no prerequisites*
Data Management Tools - *(3 Days/3 Units) - must have PeopleTools I; knowledge of PeopleSoft system and other components such as RDBMS & maintenance utilities are recommended*
Database Upgrade **-** *(2 Days/2 Units) – must have Data Management Tools; knowledge of PeopleSoft system and other components such as RDBMS & maintenance utilities are recommended*
PeopleTools II **-** *(5 Days/5 Units) – must have PeopleTools I; SQL knowledge recommended*

PeopleCode - *(5 Days/5 Units) – must have PeopleTools I; SQL knowledge recommended*
Integration Tools - *(4 Days/4 Units) – must have PeopleTools II*
Portal Solutions - *(2 Days/2 Units) – must have PeopleTools I; familiarity with Web Interface programming technologies is helpful, but not required*
Security - *(3 Days/3 Units) – must have PeopleTools I; Data Mgmt Tools recommended; SQL and Network Security*

System Administrator
PeopleTools I - *(5 Days/5 Units) – no prerequisites*
Security - *(3 Days/3 Units) – must have PeopleTools I; Data Mgmt Tools recommended; SQL and Network Security*

Network Engineer
PeopleSoft Server Administration - *(4 Days/4 Units) – no prerequisites; completion of the PeopleTools I development course for the PeopleSoft 8 environment is strongly recommended. Some familiarity with operating systems or RDBMSs will be useful. Completion of any other PeopleSoft Technical class can be helpful.*
PeopleTools I - *(5 Days/5 Units) – no prerequisites*
Process Scheduler - *(2 Days/2 Units) – must have PeopleTools I; Knowledge of DB design is recommended*

Technology Specialist
PeopleTools I **-** *(5 Days/5 Units) – no prerequisites*
SQR I - *(4 Days/4 Units)– must have PeopleTools I; knowledge of relational DB concepts; working knowledge of some 3GL language (COBOL, C)*

Query/Crystal Power Combo - *(4 Days/4Units) – no prerequisites*

Product Consultant
PeopleTools I **-** *(5 Days/5 Units) – no prerequisites*
PeopleTools II - *(5 Days/5 Units) – must have PeopleTools I; SQL knowledge recommended*
PeopleCode - *(5 Days/5 Units) – must have PeopleTools I; SQL knowledge recommended*

Integration Tools - *(4 Days/4 Units) – must have PeopleTools II*
Security - *(3 Days/3 Units) – must have PeopleTools I; Data Mgmt Tools recommended; SQL and Network Security*
Business Process Design - *(4 Days/4 Units) – must have PeopleTools II; PeopleCode & Intro to Query recommended*
Portal Solutions - (**2 Days/2 Units**) *– must have PeopleTools I; familiarity with Web Interface programming technologies is helpful, but not required.*
Application Engine - *(4 Days/4 Units) – must have PeopleTools II; some familiarity with PeopleCode is recommended*
SQR I - *(4 Days/4 Units) - must have PeopleTools I; knowledge of relational DB concepts; working knowledge of some 3GL language (COBOL, C*)
SQR II - *(4 Days/6 Units) – must have SQR I; working knowledge of SQR attained in business environment strongly recommended.*

Webcasts

Webcasts can be taken in addition to any of the above-mentioned classes. They ***DO NOT*** satisfy prerequisites for any Technical classes.

PeopleTools Overview - *(2 Days/2 Units) – no prerequisites*

Portal Developer's Workshop - *(6 Hrs./1 Unit) – must have working knowledge of HTML and at least one server-side web scripting language: ASP, Java, PERL, VBScript, etc*

Process Scheduler - *(2 Days/2 Units) – must have PeopleTools I; Knowledge of database design is strongly recommended*

Query Manager Basics - *(5 hours/0.75 Units) – must have Query Reporting, or Query Crystal Combo, or Query/Crystal Power Combo*

Query/Crystal Advanced Combo - *(2 Days/2 Units) – must have Query/Crystal for HRMS, or Query/Crystal Combo, or Query/Crystal Power Combo*

Appendix C

PeopleSoft Financials Training Classes

Overview

The following details PeopleSoft training that will be applicable to the Lucas County PeopleSoft 8.4 Financials implementation. All classes ***require*** an ability to navigate an Internet Browser, understanding of a Relational Database and working knowledge of MS Windows.

Training Class Specifics

- Classes are listed in the order in which they need to be taken (prerequisite-wise).
- Classes are approx. $525 per unit.
- Core classes in normal print – *conditions in italics*
- Specialty classes in **Bold** print - *conditions in italics*

Financial Functional Lead

Intro to PeopleSoft for Financials/SCM/EPM - *(1 Day/1 Unit) – no prerequisites*
General Ledger I - *(4 Days/4 Units) – must have Intro to Financials to take this course*

PeopleTools I - *(5 Days/5 Units) – no prerequisites*
Other application classes as needed

General Ledger Application Specialist

Intro to PeopleSoft for Financials/SCM/EPM - *(1 Day/1 Unit) – no prerequisites*
General Ledger I - *(4 Days/4 Units) – must have Intro to Financials to take this course*
General Ledger II - *(2 Days/2 Units) – must have GL I to take this course.*

Commitment Control - *(2 Days/2 Units) – no prerequisites*
NVision for General Ledger - *(5 Days/5 Units) – must have GL 1; must have a working knowledge of MS Excel*
Query/Crystal for Financials - *(2 Days/2 Units) – no prerequisites*
PeopleTools I - *(5 Days/5 Units) – no prerequisites*

Assets Application Specialist

Intro to PeopleSoft for Financials/EPM/SCM - *(1 Day/1 Unit) – no prerequisites*
Asset Management I - *(3 Days/3 Units) – must have Intro to Financials to take this course.*
Asset Management II - *(2 Days/2 Units) – must have Asset Management 1 to take this course*

Payables - *(5 Days/ 5 Units) – must have Intro to Financials to take this course.*
Purchasing – *(4 Days/4 Units) – must have Intro to Financials to take this course*
Query/Crystal for Financials - *(2 Days/2 Units) – no prerequisites*
PeopleTools I - *(5 Days/5 Units) – no prerequisites*

Payables Application Specialist
Intro to PeopleSoft for Financials/EPM/SCM - *(1 Day/1 Unit) – no prerequisites*
Payables - *(5 Days/5 Units) – must have Intro to Financials to take this course.*

Purchasing – *(4 Days/4 Units) – must have Intro to Financials to take this course*
Query/Crystal for Financials - *(2 Days/2 Units) – no prerequisites*
PeopleTools I - *(5 Days/5 Units) – no prerequisites*

Receivables Application Specialist
Intro to PeopleSoft for Financials/SCM/EPM - *(1 Day/1 Unit) – no prerequisites*
Receivables - *(4 Days/ 4 Units) – must have Intro to Financials to take this course*
Billing - *(3 Days/3 Units) – must have Intro to Financials to take this course*

Query/Crystal for Financials - *(2 Days/2 Units) – no prerequisites*
PeopleTools I - *(5 Days/5 Units) – no prerequisites*

Projects Application Specialist
Intro to PeopleSoft for Financials/SCM/EPM - *(1 Day/1 Unit) – no prerequisites*
Projects - *(3 Days/3 Units) – must have Intro to Financials to take this course*
Projects Integration - *(3 Days/ 3 Units) – must have Intro to Financials; also strongly recommended to have one additional PS course of relevance (GL, AP or AM)*

Contracts - *(4 Days/4 Units) – must have Intro to Financials to take this course*
Query/Crystal for Financials - *(2 Days/2 Units) – no prerequisites*
PeopleTools I - *(5 Days/5 Units) – no prerequisites*

Billing Application Specialist
Intro to PeopleSoft for Financials/SCM/EPM - *(1 Day/1 Unit) – no prerequisites*
Billing - (3 Days/3 Units) – must have Intro to Financials to take this course
Receivables - (4 Days/ 4 Units) – must have Intro to Financials to take this course

Contracts - *(4 Days/4 Units) – must have Intro to Financials to take this course*
Projects - *(3 Days/3 Units) – must have Intro to Financials to take this course*
Query/Crystal for Financials - *(2 Days/2 Units) – no prerequisites*
PeopleTools I - *(5 Days/5 Units) – no prerequisites*

Expense Application Specialist
Intro to PeopleSoft for Financials/SCM/EPM - *(1 Day/1 Unit) – no prerequisites*
Expenses - *(4 Days/4 Units) – must have Intro to Financials to take this course*

Payables - *(5 Days/ 5 Units) – must have Intro to Financials to take this course*
Query/Crystal for Financials - *(2 Days/2 Units) – no prerequisites*
PeopleTools I - *(5 Days/5 Units) – no prerequisites*

Budgets Application Specialist
Intro to PeopleSoft for Financials/SCM/EPM - *(1 Day/1 Unit) – no prerequisites*
General Ledger I - *(4 Days/4 Units) – must have Intro to Financials to take this course*
Budgeting - *(4 Days/4 Units) – must have Intro to Financials or GL to take this course*

Query/Crystal for Financials - *(2 Days/2 Units) – no prerequisites*
PeopleTools I - *(5 Days/5 Units) – no prerequisites*

Webcasts

Webcasts can be taken in addition to any of the above-mentioned classes. They ***DO NOT*** satisfy prerequisites for any Financial Application classes.

Budgets - *(2 Days/2 Units) – must have Intro to Financials or GL 1*

Cash Management Overview – *(8 Hrs./2 Units) – must have Intro to Financials and prior experience with PeopleSoft Financials (GL, AP or PO) is expected*

Commitment Control - *(2 Days/2 Units) – no prerequisites*

Deal/Risk Management Overview - *(1 Hr./1 Unit) - must have Intro to Financials and prior experience with PS Financials (GL, AP or PO) is expected*

Financials Overview – *(6 Hrs./1 Unit) – no prerequisites*

Financials Security Overview - *(6.5 Hrs./1 Unit) – no prerequisites; 1 Financials Intro class is strongly recommended prior to taking this course*

Intro to PeopleSoft for Financials/SCM/EPM - *(7 Hrs./1 Unit) – no prerequisites*

Projects Integration - *(3 Days/3 Units) – must have Intro to Financials OR Projects; it is also strongly recommended that one additional PS product course of relevance (GL. AP, or AM) is taken prior to this course*

Identification of External Interfaces

Deliverable

This document satisfies one of the key components of the Lucas County Pre-Implementation Planning and Preparations Scope document, dated February 2002, regarding the planned PeopleSoft Education & Government (E&G) 8.3 HR and 8.4 Financials implementation. This specific deliverable addressed the following:

> ***Identification of External Interfaces*** **–** Acuent will assist Lucas County in identifying all external systems that will interface with the PeopleSoft application on a permanent and/or a temporary basis. This interface identification effort needs to address all phases of the implementation rollout plan.

Activities

In order to provide this deliverable, Acuent completed the following activities:

- Identified the key experts in HR and Finance that could provide information regarding the presence of existing external interfaces. These individuals are as follows:

• Dan Bridge	Payroll
• Jim Volschow	Payroll
• Diane Ducey	Benefits
• Judy Baker	Benefits
• Jim Wells	Benefits (County consultant)
• Megan Hupp	Human Resources
• Marty Limmer	Finance
• Bridgette Kabat	Finance

- Conducted interviews with HR/Finance experts to catalog the interfaces that are in place today or needed in the future. In addition, any relevant technical details that would support their re-development/migration to the PeopleSoft environment were also gathered. Typically, these interfaces are programmatic in nature, but other manual or semi-programmatic interfaces may also exist as well.

- Verified the list of documented interfaces with Dan Bridge and Bridgette Kabat, the HR and Finance Program Managers respectively, to gain their concurrence.

- Discussed the need for any temporary interfaces as the cutover to production implementation occurs.

HR Interfaces

Today's HR systems capability involving Payroll, Benefits and Human Resources is characterized by stand-alone systems and in some cases, totally manual, paper-based capability. The following chart will summarize these three areas as they exist today and will list any external interfaces they may have:

Area	Current Capability	Interfaces
Payroll	In-house developed system (developed in 1986)	Stand-alone – no external interfaces
Benefits	Stand-alone, PC-based client systems capability (developed for the county by *iServ Systems* in 1990)	Manual exchanges – with Insurance carriers and third party vendors/providers
Human Resources	Manual, paper-based approach	Manual exchanges – typically with Lucas County Benefits personnel

HR Interface Needs

The implementation of PeopleSoft HR will not only centralize the HR data allowing all three functional areas common access, but it will also allow for programmatic, electronic connections to/from external sources. Payroll and Human Resources will benefit greatly from the centralization of Lucas County HR data and consequently there are no needs or plans for external interfaces in these areas at this time.

The real need for external interfaces comes from Benefits. The Benefits area today has three major insurance carriers and third party vendors where ***future*** electronic interfaces will dramatically reduce the amount of paper that is exchanged and provide significant productivity benefits. The implementation of PeopleSoft will provide the ability to deliver these external interface enhancements. These interfaces will deal with the following sources:

- **Family Health Plan**
  - Medical coverage
- **Health Care Payers Coalition** (non-profit organization)
  - Health claims processing
  - Dental claims processing
- **AmeriSource** (world' second largest wholesaler of pharmaceutical products)
  - Drug claims processing

The future interface needs for each of these sources is outlined below:

Source	Needed Electronic Exchange
Family Health Plan	• Lucas County sends insurance enrollment data weekly (or daily as needed) • Lucas County receives verification of insurance enrollment weekly (or daily as needed) • Lucas County receives a monthly feed detailing all employees and their eligible coverage(s) to support a insurance coverage reconciliation activity
Health Care Payers Coalition	• Lucas County sends enrollment data weekly (or daily as needed) • Lucas County receives enrollment verification weekly (or daily as needed) • Lucas County receives weekly information detailing claims paid (invoice summaries) • Lucas County sends a weekly response verification regarding the eligibility of received claims • Lucas County receives a monthly feed detailing all claims paid during the previous month to support a reconciliation activity. This audit addresses claims eligibility, duplicate claim entries and fraudulent claims submissions • Lucas County receives HIPAA* compliant information detailing each claim they paid on (Projected for Phase 2 capability see information below)
AmeriSource	• Lucas County sends enrollment information weekly (or daily as needed) • Lucas County receives a monthly feed detailing all employees and their eligible coverage(s) to support a reconciliation activity

HIPAA Functionality

HIPAA (*Health Insurance Portability and Accountability Act) claims information capability is intended to provide a local database of the complete information detailing every paid claim that Lucas County has paid against. Due to the magnitude of this enhancement, this is definitely a Phase 2 HR capability. There is also a strong possibility that products outside PeopleSoft will be pursued to deliver this significant upgrade in capability. In addition, there are very stringent security and privacy requirements that surround the transmission, storage and access to the complete span of health claims information. The current understanding is Lucas County needs to be HIPAA complaint by April, 2003. Judy Baker will verify this date by checking with Jim Wells and Pete Kanios.

Note: HIPAA was put into law when President Bill Clinton s signed the HIPAA bill in 1996.

Benefits External Interface Considerations

In reviewing the Benefits external interface programming needs there are several special considerations that need to be noted:

- Each of three key interface sources will need to be contacted to discuss what options they can provide to support an electronic external interface between them and the Lucas County's PeopleSoft implementation. This discussion also needs to address the timeliness of their support relative to the HR Phase 1 implementation effort.

- While each source should have enough systems capability to provide the necessary data, the actual technical approach and how that external interface will be architected will need to be addressed on a source-by-source basis (Family Health Plan, Health Care Payers Coalition, and AmeriSource). Each of the three sources will need to be contacted to determine how the data will be exchanged and the availability of associated data mapping documentation to support the development of the specific external interface to/from the specific source and PeopleSoft. After this research has been completed, the feasibility and effort to implement the interfaces should be better understood - especially, as it relates to the delivery of HR Phase 1 capability.

Finance Interfaces

In the Finance area there a number of ***existing*** external interfaces that support exchanges with selected banks and the distribution of 1099 related data. These interfaces needs are as follows:

Data Exchanged	Sends / Receives	Frequency	Media
Bank account reconciliation data	Receives	Monthly	Magnetic tape from Key Bank (Toledo, OH)
Vendor 1099s	Sends	Annually (tax purposes)	Extracted, printed and sent to selected vendors via the U.S. mail
1099 Summary File	Sends	Annually (tax purposes)	Sent to the U. S. Government via a dial-up connection to their web site
Treasury funds (?)*	Sends	Daily	Wire transfers to National City bank (Toledo, OH)

*__Note__: Treasury is still being evaluated to determine if it is in scope for the PeopleSoft ERP implementation.

Data Conversions

Deliverable

This document satisfies one of the key components of the Lucas County Pre-Implementation Planning and Preparations Scope document, dated February 2002, regarding the planned PeopleSoft Education & Government (E&G) 8.3 HR and 8.4 Financials implementation. This specific deliverable addressed the following:

> ***Data Conversion*** **–** Acuent will work closely with Lucas County in developing a data conversion strategy to determine what legacy data will be converted and whether the conversion will be programmatic, manual, or some combination of both approaches. The Lucas County approach to handling history data and the number of interfacing applications will have a key impact on this overall strategy development.

Activities

In order to provide this deliverable, Acuent completed the following activities:

- Identified the key experts in HR and Finance that could provide information regarding the need to covert data from legacy sources into the PeopleSoft environment. These individuals are as follows:

• Dan Bridge	Payroll
• Jim Volschow	Payroll
• Diane Ducey	Benefits
• Judy Baker	Benefits
• Jim Wells	Benefits (County Benefits Consultant)
• Megan Hupp	Human Resources
• Marty Limmer	Finance

- Conducted interviews with HR/Finance experts to catalog the data that will need to be converted and the most appropriate method to accomplish that conversion. Data conversion options include the manual entry of the data using standard PeopleSoft capability or the development of programs to collect and programmatically store the data into PeopleSoft. In some cases, a combination of both approaches may be necessary.

- Verified the list of documented interfaces with Dan Bridge and Bridgette Kabat, the HR and Finance Program Managers respectively, to gain their concurrence.

- Packaged the Acuent Data Conversion Rapid Application Development (RAD) as an addendum to this document to support future Lucas County PeopleSoft data conversion needs. See *Appendix A* for more details concerning the RAD methodology.

HR Data Conversions

The fundamental strategy for the HR Phase 1 data conversion will be to manually re-enter as much data as possible through standard PeopleSoft screens. This has been a topic of several HR/Payroll Implementation Team meetings and the consensus has always been in favor of a manual re-entry approach. There are two key reasons why the HR/Payroll Implementation Team considers this is the most effective approach for Lucas County:

- The manual re-entry approach will "naturally require" that each piece of data targeted for the PeopleSoft implementation has been reviewed and corrected before being loaded into the system.

- A programmatic approach will allow the opportunity to simply sample the converted data to verify its validity

The sampling technique afforded by the respective data conversion program may ***not*** catch all the data that needs to be corrected

In the Human Resources area there are numerous HR "shadow systems", typically PC-based, that supports HR functions in the different departments. Having to develop a special data conversion program for each unique solution could be extremely time consuming and prohibitive.

Benefits Data Conversion Needs

The HR/Payroll exception where data conversion developed programs are applicable is in the Benefits area. After Payroll and Human resources have manually loaded data that pertains to their functional areas, a significant amount of the data that supports Benefits will be in place. However, Benefits will still have critical data needs that have not been addressed by the Payroll and Human Resources configuration setup and data loading activities. This additional data will need to be extracted from the existing client/server application serving the Lucas County Benefits area and converted programmatically into the appropriate tables in PeopleSoft. The two specific Benefits conversion program needs are:

1. **Dependents** (from the Lucas County Health Benefits Enrollment Form)

    - Spouse
        - Last Name, First Name, M.I.
        - PCP (Primary Care Physician)
        - Birthdate
        - Gender (M/F)
        - Tobacco User (Yes/No)
        - SSN (Social Security Number)
        - Other health care coverage

- Child
  - Last Name, First Name, M.I.
  - PCP (Primary Care Physician)
  - Birthdate
  - Gender (M/F)
  - Full Time Student (Yes/No)
  - Tobacco User (Yes/No)
  - SSN (Social Security Number)
  - Relationship (Son/Daughter/Stepson/Stepdaughter/Other)
  - Court Order (Yes/No)
  - Court Order – Responsible Parent)
  - Physically disabled or Mentally retarded / (Y/N)
  - Childs' address different (Y/N)
  - Last Name, First Name, M.I.
  - Address
  - College/University address (Y/N)
  - Other health care coverage

2. Insurance Carriers

- Specific carriers and eligible participants

Data Conversion Considerations

In reviewing the Benefits data conversion programming needs there are several special considerations that need to be noted:

- COBRA related coverage for employees and their dependents will continue to be covered by the current 'Travis Software' solution at Lucas County, at least through HR Phase 1 capability.

- The original developer of the Current Lucas County Benefits capability is Keith Morehouse. Keith will need to be contacted (or *iServ Systems*) to determine the feasibility and timeliness of delivering the necessary data extracts from the current Benefits client/server system and the associated data mapping documentation to support the development of the new referenced PeopleSoft data conversion programs (dependents and insurance carriers). Keith and company will need to have the necessary knowledgeable resources that can provide the data extracts and mapping documentation and in a time frame that supports the HR Phase 1 implementation. Keith is now the CTO/Board President of iServ Systems that delivered the current Lucas County Benefits solution. See www.iservsystems.com for more details on iServ Systems and their capabilities. Judy Baker has provided a current email address for Keith – kmorehouse@iservsystems.com .

HR data conversions can be summarized as follows:

Area	Strategy
Payroll	Load ***all data manually*** to re-enforce active review and clean-up as appropriate
Human Resources	Load ***all data manually*** to re-enforce active review and clean-up as appropriate
Benefits	Load the majority of needed data through the ***two major data conversion programs***: 1) ***employee dependent*** data and 2) ***insurance carrier*** information. Make manual adjustments to this converted data via standard PeopleSoft screens.

Finance Data Conversions

The Finance Data Conversions strategy will utilize several techniques and approaches. This strategy can be summarized as follows:

- The finance team will primarily load as much data as possible manually via standard PeopleSoft input screens. The bulk of the data to be loaded will be accomplished in this fashion. This activity will continue from the beginning of implementation through 'Go Live' and subsequent day-to-day processing.

- Prior to production 'Go Live' all open contracts, POs (Purchase Orders) and encumbrances will be manually re-loaded into PeopleSoft. There will be a moratorium period where no new contracts, POs or encumbrances will be added to the legacy HP system. This period will terminate the use of the legacy capability and will allow time for these open items to be added to PeopleSoft. This period should be as close to 'Go Live' as possible to minimize the impact on Lucas County business activity.

- There will be no focus on converting 2003 financial data (expenses, receipts, encumbrances, etc.) from the HP legacy system into PeopleSoft. For this particular year all financial reporting and analysis will require data to be extracted from both systems as appropriate.

Note: While the "two system" approach does simply the overall financial implementation, this position will need to be re-examined in more depth as the financial phase of the implementation officially begins in the October-November 2002 time frame. One very feasible alternative would be to identify critical ending balances in the HP legacy system and move that data via journal entries to the PeopleSoft GL. With this data in PeopleSoft, the financial community could perform YTD (year-to-date) financial reporting in critical areas and support the creation of the CAFR (Comprehensive Annual Financial

Report) using financial data from just one source - PeopleSoft! The timely creation of the CAFR is a key focus and requirement for the accounting function at Lucas County.

The one exception to the manual load approach involves the *Vendor Master File*. In this case a data conversion program will be utilized. To prepare for the conversion program development, the legacy finance team will begin a clean-up effort well in advance of the actual conversion. This effort will convert all the non-unique vendor codes into a new temporary file structure where the vendor codes are unique, but support multiple, valid addresses. This new file will be the input to the PeopleSoft Vendor Master File conversion program. The PeopleSoft data conversion will then be developed, successfully unit tested and ultimately executed to populate the appropriate PeopleSoft tables with the corresponding data. Prior to production 'Go Live', the business community will need to review the converted data in PeopleSoft to verify the accuracy of the data conversion activity.

The Financial data conversion approach can be summarized as follows:

Area	Strategy
Historical financial data (2002 and later)	Leave the data on the legacy mainframe Do not develop conversion capability to move this data into PeopleSoft
2003 financial data	Leave the data on the legacy mainframe 2003 financial reporting/analysis will require ***both*** systems – PeopleSoft and the HP legacy mainframe
Open contracts, POs, and encumbrances	"Freeze" the legacy system prior to 'Go Live' and manually re-load open contracts, POs, and encumbrances.
Vendor Master File	Begin the clean-up on the current legacy data as soon as possible Utilize this revised, clean data as input to a PeopleSoft data conversion program Develop, test and execute the PeopleSoft conversion program to populate this data into the appropriate PeopleSoft tables. Lucas County will review and verify the accuracy and usefulness of the converted data in PeopleSoft.

Appendix A

Acuent PeopleSoft Data Conversions
Rapid Application Development Model

Introduction

Critical to any PeopleSoft implementation is the accurate and timely conversion of data from the old system to the new. This can be a very complex and time-consuming process, given the multitude of tables involved and their interdependencies. In order to drastically expedite this process, Acuent has developed an approach to data conversions based on the Rapid Application Development (RAD) model. Specifically, it incorporates (a) **prototyping and tracing** to shorten the process of identifying and mapping all impacted tables, (b) **using Microsoft Office software** to quickly and easily manipulate source data and (c) **creating generic data loaders** to accelerate the programming effort. The net result will be the transfer of the data into PeopleSoft with minimal analysis and programming.

Objectives

These procedures outline the respective roles of a functional and technical resource during the data conversion phase of an implementation. As such, it requires only the most basic level of expertise on the part of each contributor. That is, the functional resource needs only a general familiarity with the application(s) being installed. Likewise, the technical contributor can get by with just a limited amount of SQL/SQR and PeopleTools experience. By combining each person's skills with this methodology, a synergy can be achieved by which even novice PeopleSoft implementation team members can accomplish complex conversions. *Furthermore, this approach is completely generic and therefore can be applied to any release of any PeopleSoft module.*

Another important objective of this approach is the **knowledge transfer** that occurs between the both the functional and the technical community. Because of the close interaction required, each person involved will gain a better understanding of PeopleSoft in general. For instance, a technical resource may learn more about payroll processing or general ledgers. Likewise, the functional contributor may become more familiar with SQL traces and Application Designer. *Over time, this will make both parties more knowledgeable on concepts traditionally outside their field of expertise, thereby making them more productive and self-sufficient.*

Overview

In any data conversion process, there are certain steps that must be taken to transfer the data from one system to another. They are broken out into the following five phases:

Data Mapping – Table definitions in PeopleSoft must be mapped back to the record definitions in the legacy system. Example: PS_PERSONAL_DATA table mapped to the mainframe EMPLOYEE_DATA record layout.

Data Translation – Specific field values may have to be translated to incorporate revised key structures. Example: Translate old 4-digit ACCOUNT number to new 6-digit format.

Data Scrubbing – Invalid and/or outdated information must be filtered out prior to loading to PeopleSoft. Example: Eliminate all duplicate and inactive VENDOR records.

Data Verification – Before actually loading the data, it should be reviewed for accuracy. Example: Running Trial Balances to reconcile final LEDGER balances.

Data Loading – Move the finalized version of the data into PeopleSoft tables. Example: using either SQR or Import Manager.
The following documentation will discuss each of the 5 data conversion phases. In addition, within each phase alternatives and shortcuts will be introduced based on the RAD (Rapid Application Development) model, which will drastically reduce the time and effort that will be required.

Procedures

To demonstrate this data conversion methodology, we will use the PeopleSoft General Ledger system as an example. We will populate the database with historical Journal information from a fictional legacy system. At the beginning of each phase concepts will be discussed that will facilitate the process, followed by a step-by-step guide to accomplishing the task. Note that steps designated with a **(T)** are tasks for the technical contributor, while those with **(F)** are for the functional specialist.

Phase 1: Data Mapping

The first step in data conversions is to map record definitions between PeopleSoft and the legacy system. In order to facilitate the mapping process, it is useful to view things in the system as **objects**. An object represents a real-word entity or construct (e.g., Vendor), as opposed to record definitions (e.g., PS_VENDOR, PS_VENDOR_ADDR, PS_VENDOR_LOC, etc.). Each PeopleSoft module has objects associated with it, as in the following examples:

Module	Objects
General Ledger	Ledgers, Accounts, Journals
Human Resources	Employees, Jobs
Billing	Customers, Invoices

Users prefer dealing with objects because they are already familiar with them, having already worked with them in their legacy system. All that will be required from the users is to enter that same information into PeopleSoft. In fact, PeopleSoft's architecture facilitates the entry of objects by grouping together all information related to them into Panel Groups.

To enable users to start entering objects into PeopleSoft during the initial stages of an implementation, we will use a method called **prototyping.** Prototyping involves using a full-scale and functional form of the new system right away in order to determine what the user requirements are. A working prototype of PeopleSoft that is always available in the Demo database. Ideally, though, you should use the client's Development or Test

instance, as they should contain the appropriate Control Table setups and Business Units specific to the client. As we shall see later, this makes the mapping process much simpler. We then instruct the users to enter one example for each of the objects associated with the PeopleSoft modules being installed.

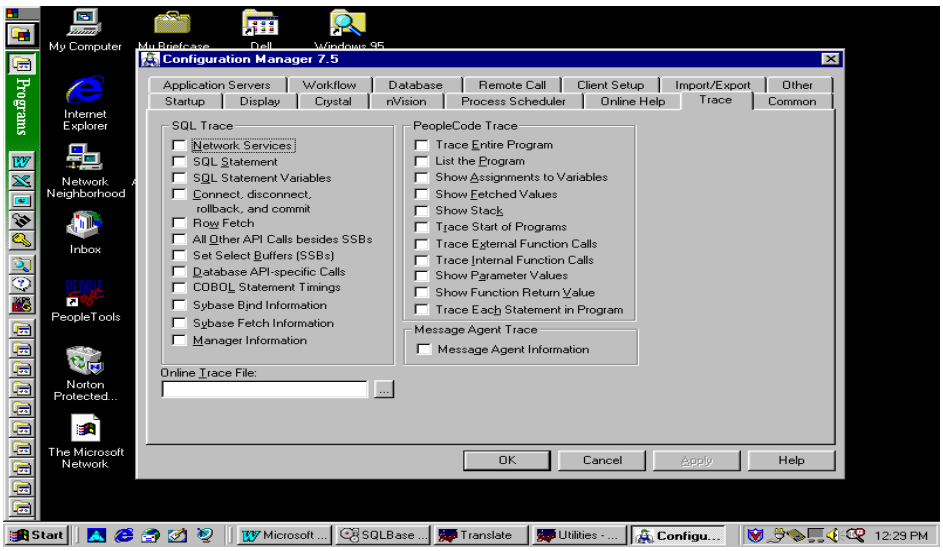
Each time the user saves an object in PeopleSoft, we can use a **trace** to capture the SQL statements that are generated and sent to the underlying database. These statements contain valuable information on which tables are being updated with what information. *By capturing these SQL statements, we can effectively identify every table associated with every object*. We can then go a step further by determining the relationships between each of the tables.

Thus, by combining the concepts of objects, prototyping and tracing, we can very quickly accomplish the data mapping phase by (a) identifying all the PeopleSoft tables and their relationships for each object and (b) mapping them to the legacy system. Following are the steps to accomplish this:

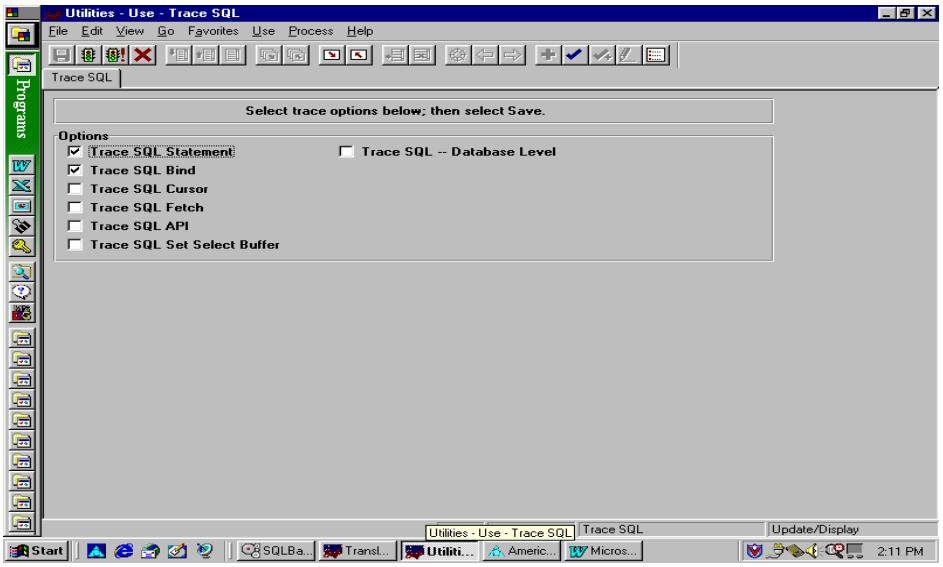
1.0 **Turn on the SQL Statement Trace. (T)**

1.1 Make sure all trace options are turned off in the **Configuration Manager,** and that there is no Online Trace File specified that would override the default. It is recommended that you turn on traces only from within PeopleTools Utilities, in order to better control when to turn the trace on and off within each session.

Note: In some cases the following screen shots will reflect capability found in PeopleSoft 7.5. While the screen shots for PeopleSoft 8.x are different, the underlying PeopleSoft table constructs and critical data relationships are still valid.



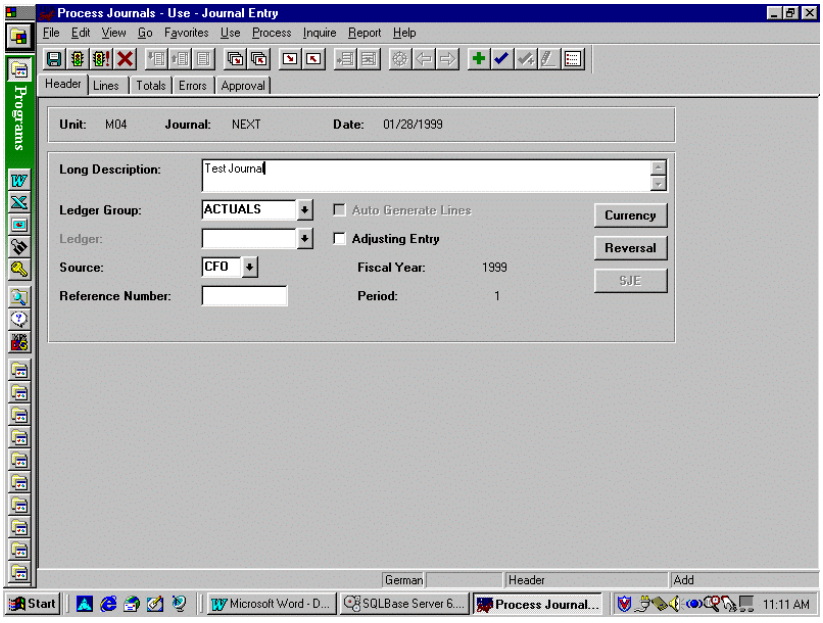
1.2 Log on to PeopleSoft. Go to **PeopleTools, Utilities, Use, Trace SQL**. Check off **Trace SQL Statement** and **Trace SQL Bind**.[1] Save the record.



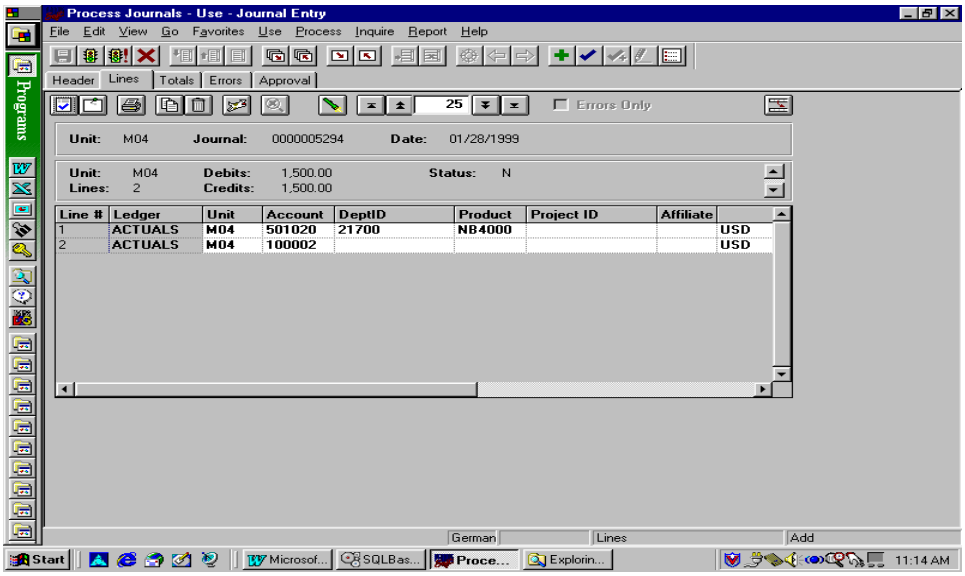
2.0 **Navigate the user to the appropriate panel group to enter the object. (F)**

2.1 For this example, go to **Process Financial Information, Process Journals, Use, Journal Entry, Header, Add.** Hit OK at the prompt and enter all the information related to the journal:

2.2 *If there are any scroll levels within the panel, you should insert more than one row.* For instance, in this example we entered multiple journal lines.



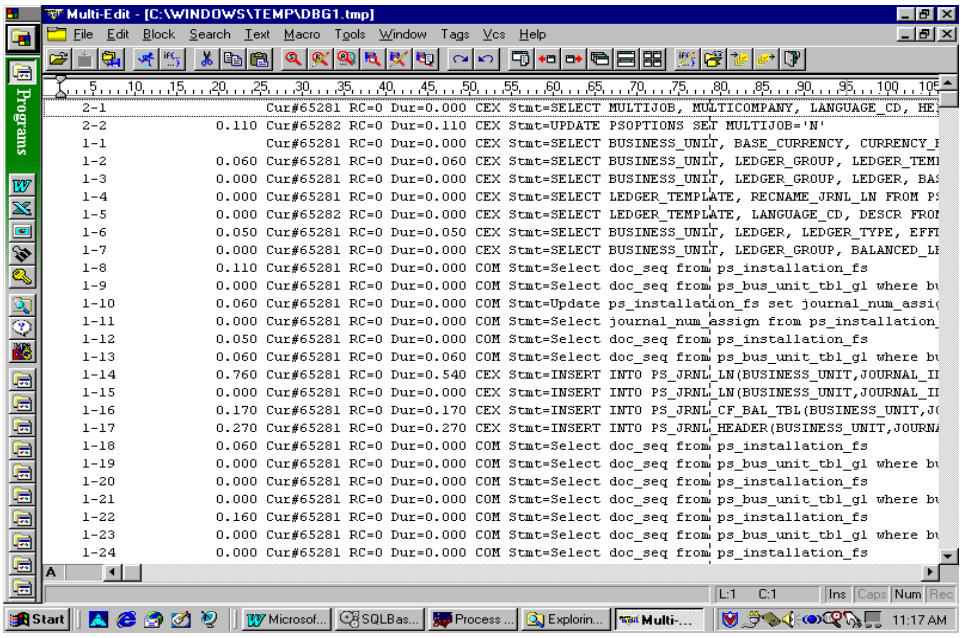
[1] The latter will be helpful if you are working in a database environment that uses Bind Variables in the SQL Statement (e.g., "INSERT INTO…VALUES(:1, :2 …), rather than incorporating the actual data values into the statement (e.g., "INSERT INTO…VALUES('M04','00012345',…).



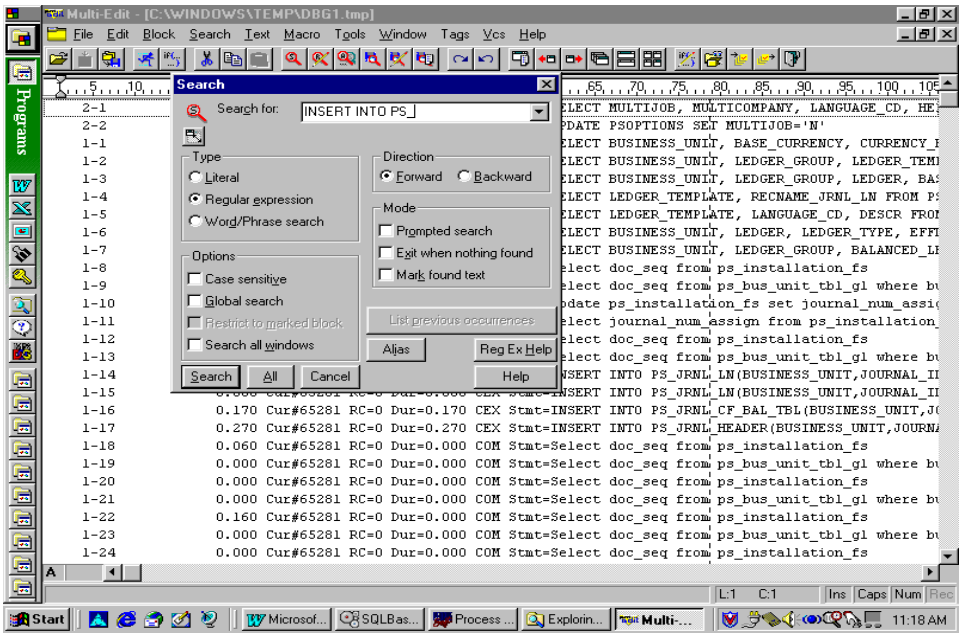
2.3 Save the Journal record.

3.0 **Analyze the resulting trace file. (T)**

3.1 Unless the defaults have been changed in Configuration Manager, the trace file created will be in C:\WINDOWS\TEMP\DBG1.TMP. Edit this file:



3.2 **Search for all instances of the string "INSERT INTO PS_"**. These SQL statements identify the **application tables** which were populated with data when the object was saved.



3.3 Store these SQL Statements in a separate file.

INSERT INTO **PS_JRNL_LN**(BUSINESS_UNIT,JOURNAL_ID,JOURNAL_DATE,UNPOST_SEQ,JOURNAL_LINE,LEDGER,ACCOUNT,DEPTID,PRODUCT,PROJECT_ID, AFFILIATE,CURRENCY_CD,STATISTICS_CODE,MONETARY_AMOUNT,MOVEMENT_FLAG,STATISTIC_AMOUNT,JRNL_LN_REF,SUSPENDED_LINE,LINE_DESCR,JRNL_LI NE_STATUS,JOURNAL_LINE_DATE,FOREIGN_CURRENCY,RT_TYPE,FOREIGN_AMOUNT,RATE_DIV,RATE_MULT,PROCESS_INSTANCE,DOC_TYPE,DOC_SEQ_NBR,DO C_SEQ_DATE,DOC_SEQ_STATUS,JRNL_LINE_SOURCE) VALUES('M04','0000005294','1999-01-28',0,1,'ACTUALS','501020','21700','NB4000',' ',' ','USD',' ',1500,'N',0,' ',0,'COGS - Unreimbursed Airfare','0','1999-01-28','USD',' ',1500,1,1,0,' ',' ',' ','1999-01-28',' ','PNL')

INSERT INTO **PS_JRNL_LN**(BUSINESS_UNIT,JOURNAL_ID,JOURNAL_DATE,UNPOST_SEQ,JOURNAL_LINE,LEDGER,ACCOUNT,DEPTID,PRODUCT,PROJECT_ID, AFFILIATE,CURRENCY_CD,STATISTICS_CODE,MONETARY_AMOUNT,MOVEMENT_FLAG,STATISTIC_AMOUNT,JRNL_LN_REF,SUSPENDED_LINE,LINE_DESCR,JRNL_LI NE_STATUS,JOURNAL_LINE_DATE,FOREIGN_CURRENCY,RT_TYPE,FOREIGN_AMOUNT,RATE_DIV,RATE_MULT,PROCESS_INSTANCE,DOC_TYPE,DOC_SEQ_NBR,DO C_SEQ_DATE,DOC_SEQ_STATUS,JRNL_LINE_SOURCE) VALUES('M04','0000005294','1999-01-28',0,2,'ACTUALS','100002',' ',' ',' ',' ',' ','USD',' ',-1500,'N',0,' ',0,'Checking Acct-Queens Bank','0','1999-01-28','USD',' ',-1500,1,1,0,' ',' ',' ','1999-01-28',' ','PNL')

INSERT INTO **PS_JRNL_CF_BAL_TBL**(BUSINESS_UNIT,JOURNAL_ID,JOURNAL_DATE,UNPOST_SEQ,LEDGER,BUSINESS_UNIT_BAL,CURRENCY_CD, FOREIGN_CURRENCY,JRNL_CNTL_DEBITS,JRNL_TOTAL_DEBITS,JRNL_CNTL_CREDITS,JRNL_TOT_CREDITS,CTL_FOREIGN_DEBITS,TOT_FOREIGN_DEBITS,CTL_FO REIGN_CREDIT,TOT_FOREIGN_CREDIT,JRNL_CNTL_UNITS,JRNL_NET_UNITS,JRNL_CNTL_LINES,JRNL_TOTAL_LINES) VALUES('M04','0000005294','1999-01-28',0,'ACTUALS','M04','USD','USD',0,1500,0,1500,0,1500,0,1500,0,0,0,0,2)

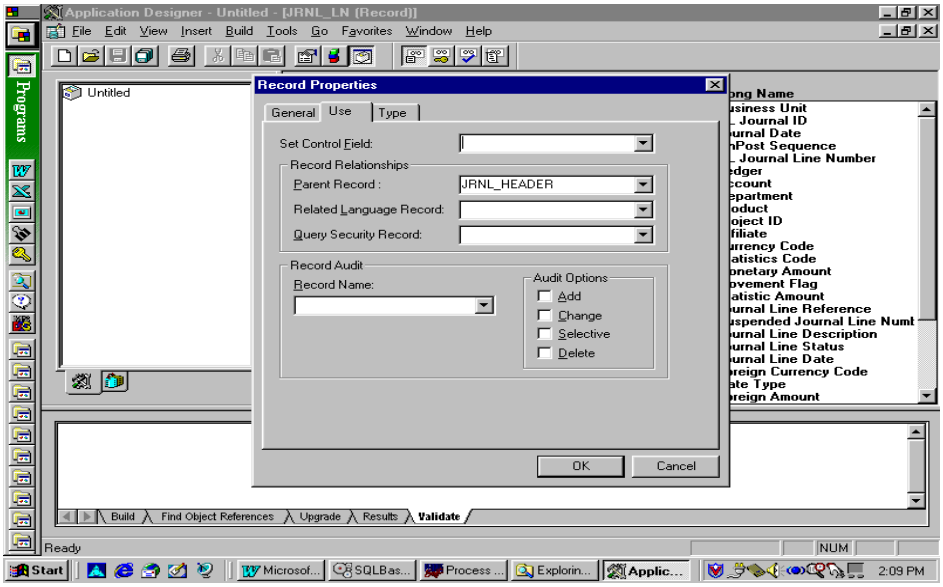
INSERT INTO **PS_JRNL_HEADER**(BUSINESS_UNIT,JOURNAL_ID,JOURNAL_DATE,UNPOST_SEQ,BUSINESS_UNIT_IU,FISCAL_YEAR,ACCOUNTING_PERIOD, ADB_DATE,LEDGER_GROUP,LEDGER,AUTO_GEN_LINES,REVERSAL_CD,JRNL_TOTAL_LINES,JRNL_TOTAL_DEBITS,JRNL_TOT_CREDITS,JRNL_NET_UNITS,SOURCE,T RANS_REF_NUM,JRNL_BALANCE_STAT,CONTROL_TOTAL_STAT,JRNL_EDIT_ERR_STAT,JRNL_HDR_STATUS,SUSP_RECON_STATUS,JRNL_PROCESS_REQST,JRNL_ SUMLED_REQST,SJE_TYPE,SCHEDULE,EVENT_OCCURRENCE,PROCESS_INSTANCE,SOURCE_INSTANCE,TRANSACTION_DATE,LAST_LN_COMMITTED,OPRID,DTTM_ STAMP_SEC,DESCR,CURRENCY_CD,FOREIGN_CURRENCY,RT_TYPE,CUR_EFFDT,RATE_DIV,RATE_MULT,SYSTEM_SOURCE,DOC_TYPE,DOC_SEQ_NBR,DOC_SEQ_D ATE,DOC_SEQ_STATUS,ACCTG_DEF_NAME,DESCR254) VALUES('M04','0000005294','1999-01-28',0,'M04',1999,1,'1999-01-28','ACTUALS',' ','N','N',2,1500,1500,0,'CFO',' ','V','V','V','N','0','N','N',' ',' ',0,0,0,'1999-01-28',0,'VP1','1999-01-28-11.14.45.000000','Test Journal','USD','USD',' ','1999-01-28',1,1,'PNL',' ',' ',' ','1999-01-28',' ',' ',' ','Test Journal')

3.4 Note the table names after the “INSERT INTO” clause. Note also the field formats, default parameters and values inherited from the setups in the VALUES clause of the INSERT statements. *As we mentioned earlier, entering an object into the client’s Test database (rather than the Demo database) results in SQL statements that contain more accurate default values.* These will be extremely helpful in the mapping and programming effort.

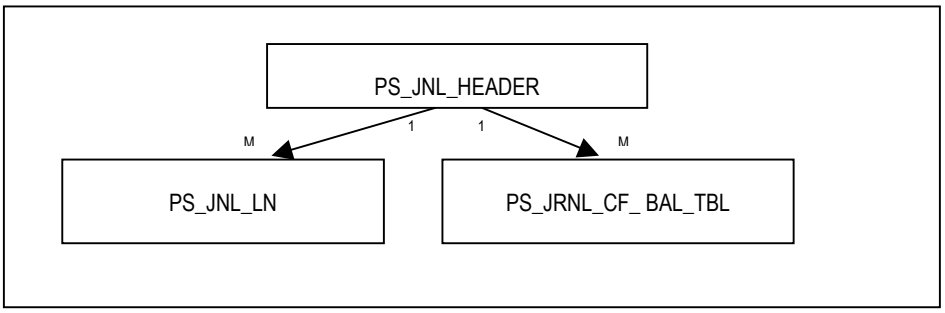
3.5 Also make note of any statements that contain the string **“UPDATE PS_”.** While not necessarily critical, they may include information on counters or registers that may need to be updated each time a record is saved.

3.6 Disregard any INSERT statements that do not update application tables (tables not beginning with "PS_"). For instance, inserts into PSAUDIT are not required for data conversions.

3.7 Look for any redundant table inserts. These represent **Parent/Child relationships**. For example, note that PS_JRNL_LN has more than one insert statement. A look at the Object Properties panel for this record in Application Designer reveals that this record is a child to PS_JRNL_HEADER. *This is the reason it is important to insert multiple rows in panels with scroll levels: to facilitate identifying Parent/Child relationships.*



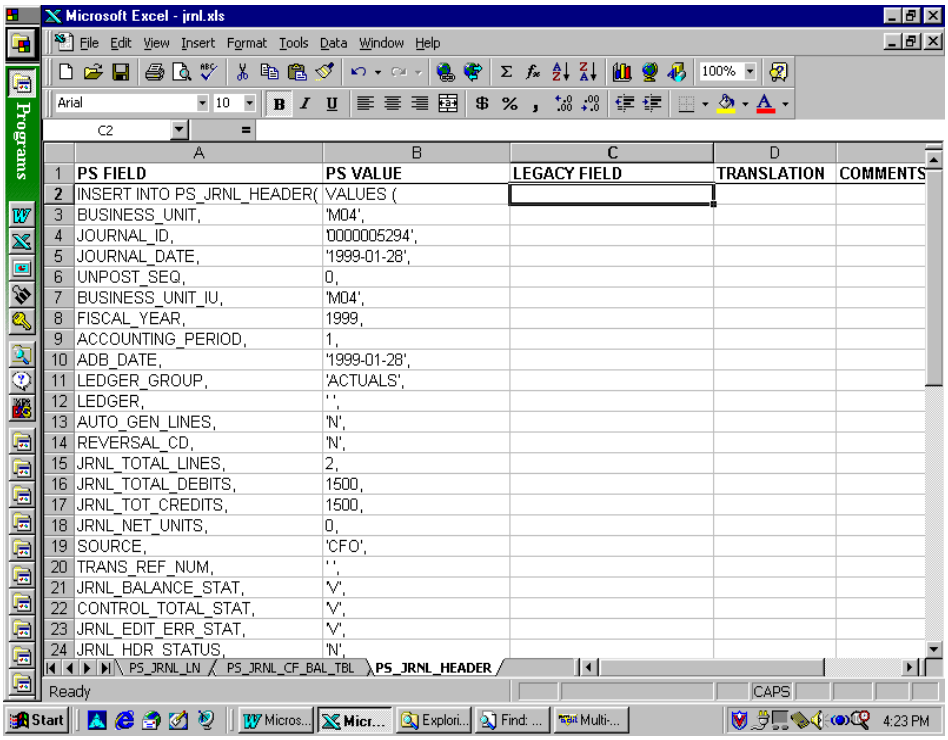
3.8 You may construct a diagram showing the relationships between all the tables for this object, if you find it helpful.



3.9 Cut and Paste each SQL Statement into a separate Worksheet in an Excel spreadsheet.[2] If a table has more than one SQL Insert statement, create a worksheet for only one of them. Format the data such that the first column contains the field names, with one row for each field, and the next column contains the data values from the trace. Then add any

[2] A Visual Basic macro is available to automatically transfer the text of an INSERT statement into a properly formatted spreadsheet.

additional columns that are needed for the mapping process (e.g., Legacy Field Name, Translation Tables, etc.).



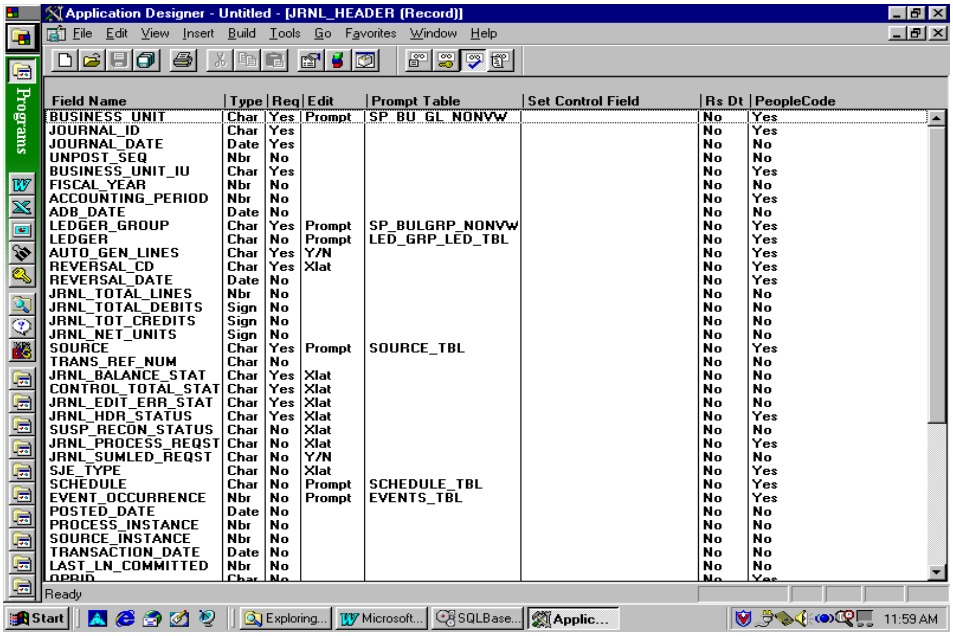
	A	B	C	D	
1	PS FIELD	PS VALUE	LEGACY FIELD	TRANSLATION	COMMENTS
2	INSERT INTO PS_JRNL_HEADER(	VALUES (			
3	BUSINESS_UNIT,	'M04',			
4	JOURNAL_ID,	'0000005294',			
5	JOURNAL_DATE,	'1999-01-28',			
6	UNPOST_SEQ,	0,			
7	BUSINESS_UNIT_IU,	'M04',			
8	FISCAL_YEAR,	1999,			
9	ACCOUNTING_PERIOD,	1,			
10	ADB_DATE,	'1999-01-28',			
11	LEDGER_GROUP,	'ACTUALS',			
12	LEDGER,	'',			
13	AUTO_GEN_LINES,	'N',			
14	REVERSAL_CD,	'N',			
15	JRNL_TOTAL_LINES,	2,			
16	JRNL_TOTAL_DEBITS,	1500,			
17	JRNL_TOT_CREDITS,	1500,			
18	JRNL_NET_UNITS,	0,			
19	SOURCE,	'CFO',			
20	TRANS_REF_NUM,	'',			
21	JRNL_BALANCE_STAT,	'V',			
22	CONTROL_TOTAL_STAT,	'V',			
23	JRNL_EDIT_ERR_STAT,	'V',			
24	JRNL_HDR_STATUS,	'N',			

4.0 Begin mapping each table. (F/T).

4.1 Working with the users, enter the corresponding field name from the legacy system for each of the fields in the spreadsheet. If a corresponding legacy field name doesn't exist, verify with user whether or not the value defaulted in the trace is acceptable.

4.2 Identify which fields will be populated with data from the legacy system, especially key fields and non-constant fields. For instance, the value for BUSINESS_UNIT currently is 'M04', which is obviously not a constant. So, the data from the legacy system must contain this information or a value that can be translated into the proper BUSINESS_UNIT (See Phase 2: Data Translation).

4.3 At the very least, you should identify the **required fields** in PeopleSoft. These can be easily determined by looking at the record definition in Application Designer:



4.4 Map each of these required fields with their counterparts from the legacy system. For now, all other PeopleSoft fields that aren't matched up with a legacy field can initially be populated with the defaulted values from the trace. At each stage these mappings can be further fine-tuned until they are optimal. *By using the trace default values, however, you can proceed to the next step and simply come back to them if any adjustments are required.*

4.5 If the data files already exist prior to the mapping effort, we can "reverse-engineer" them into the spreadsheets by entering each field name from the file layout of the data file into the appropriate cell in the spreadsheet.

4.6 Some hints on mapping:

4.6.1 Make sure that the key values for each table are accounted for, either with a corresponding legacy field (e.g., CORP) or a default value (e.g., 'ACTUALS').

4.6.2 Distinguish between fields containing constant values versus those with varying data. Those values which vary are prime candidates for data that will be in the conversion data file (e.g., Business Units, Amounts, Employee ID's, etc.).

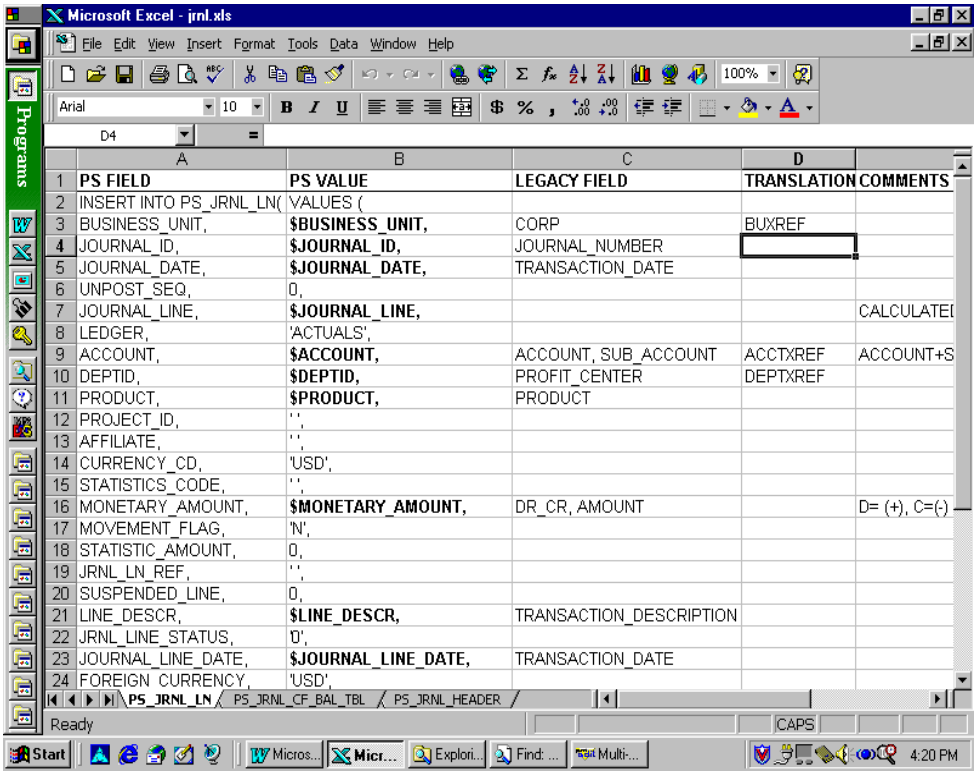
4.6.3 Most of the PeopleSoft fields that are flags, switches and/or options can be populated with the values from the trace (e.g., DOC_TYPE, RT_TYPE, etc.). *By simply accepting the value from the trace instead of trying to map each and every PeopleSoft field, you will save a lot of time and effort.*

4.6.4 Date fields from the legacy system are often mapped to more than one field in PeopleSoft (e.g., TRANSACTION_DATE = PS TRANSACTION DATE and PS JOURNAL DATE).

4.6.5 If multiple fields in the legacy system map to one field in PeopleSoft, some translation will be required (See Phase 2: Data Translation).

4.6.6 Some PeopleSoft fields may be populated by calculated values (e.g., JRNL_TOTAL_DEBITS) and therefore need not be mapped to the legacy system.

4.7 For each PeopleSoft field that has been matched up with a legacy field, replace the value from the trace with the PeopleSoft field name preceded by a '**$**'. Your finished spreadsheet may look something like this:



	A	B	C	D	
1	**PS FIELD**	**PS VALUE**	**LEGACY FIELD**	**TRANSLATION**	**COMMENTS**
2	INSERT INTO PS_JRNL_LN(	VALUES (			
3	BUSINESS_UNIT,	**$BUSINESS_UNIT,**	CORP	BUXREF	
4	JOURNAL_ID,	**$JOURNAL_ID,**	JOURNAL_NUMBER		
5	JOURNAL_DATE,	**$JOURNAL_DATE,**	TRANSACTION_DATE		
6	UNPOST_SEQ,	0,			
7	JOURNAL_LINE,	**$JOURNAL_LINE,**			CALCULATEI
8	LEDGER,	'ACTUALS',			
9	ACCOUNT,	**$ACCOUNT,**	ACCOUNT, SUB_ACCOUNT	ACCTXREF	ACCOUNT+S
10	DEPTID,	**$DEPTID,**	PROFIT_CENTER	DEPTXREF	
11	PRODUCT,	**$PRODUCT,**	PRODUCT		
12	PROJECT_ID,	'',			
13	AFFILIATE,	'',			
14	CURRENCY_CD,	'USD',			
15	STATISTICS_CODE,	'',			
16	MONETARY_AMOUNT,	**$MONETARY_AMOUNT,**	DR_CR, AMOUNT		D= (+), C=(-)
17	MOVEMENT_FLAG,	'N',			
18	STATISTIC_AMOUNT,	0,			
19	JRNL_LN_REF,	'',			
20	SUSPENDED_LINE,	0,			
21	LINE_DESCR,	**$LINE_DESCR,**	TRANSACTION_DESCRIPTION		
22	JRNL_LINE_STATUS,	'0',			
23	JOURNAL_LINE_DATE,	**$JOURNAL_LINE_DATE,**	TRANSACTION_DATE		
24	FOREIGN_CURRENCY,	'USD',			

5.0 **For each spreadsheet (object), create the file layout for data file from legacy system (T)**.

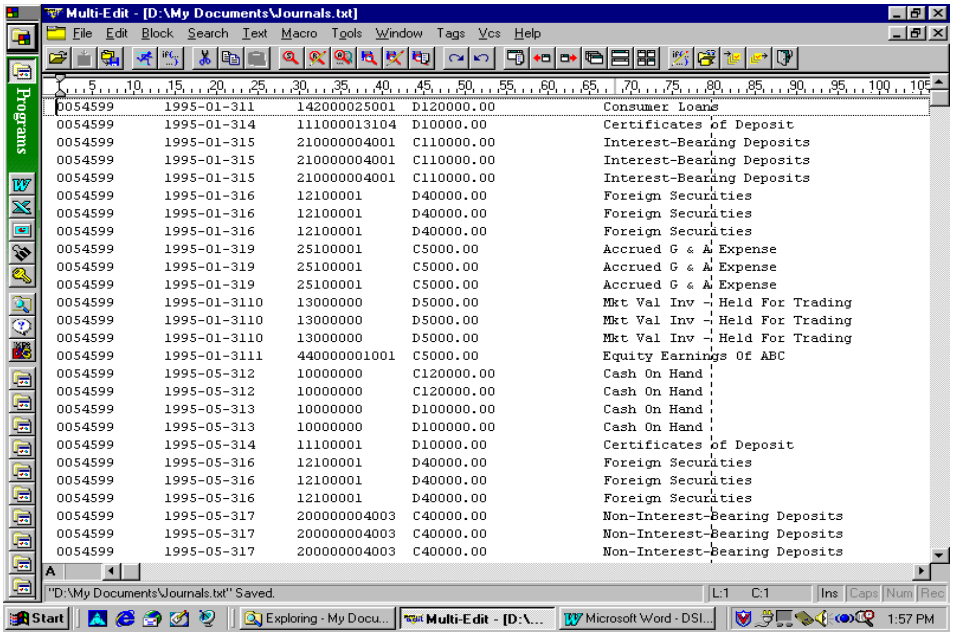
5.1 Once the mapping has been done, you will need to start putting together the specifications for the conversion data files that will be exported from the legacy system. You can use the mapping spreadsheet to put together a file layout for the data file for each object. *The file layout should be normalized such that all the fields required for all the tables associated with the object can be found in each record.*[3] For example, based on our mapping of the Journal object we will need a conversion data file with the following record layout:

[3]You could also create separate file layouts for the parent and child records and treat them as separate data loads. However, doing so puts the referential integrity of the data at risk. That is, you may end up populating parent tables without the corresponding child tables, or vice versa, resulting in *orphan records.*

FIELD NAME	DATA TYPE	START	LENGTH
CORP_CODE	NUMERIC	1	3
JOURNAL_NUMBER	ALPHANUM	4	10
TRANSACTION_DATE	ALPHANUM	14	10
LINE_NUMBER	NUMERIC	24	5
ACCOUNT	ALPHANUM	29	4
SUB_ACCOUNT	ALPHANUM	33	4
PROFIT_CENTER	ALPHANUM	37	5
DR_CR	ALPHA	42	1
AMOUNT	NUMERIC	43	20
TRANSACTION_DESCRIPTION	ALPHANUM	63	30

5.2 Again, if the data files already existed prior to the mapping effort, there would be no need to create these layouts. Otherwise, submit the layouts to the client's IT group so that they can export the data from the legacy system. Generally, these files should be in ASCII text, non-delimited format.[4]

Based on the file layout above you will get a conversion data file that is similar to the following:



5.3 Once the conversion data files are ready you can proceed to the next phase.

[4] If the data originated from a mainframe system or is from an EBCDIC-based system, makes sure that the numeric values have been uncompressed prior to conversion to ASCII text. Otherwise you will have to convert the signed-field characters.

Phase 2: Data Translation

In many instances, the client will need to translate some of their current information into a new format. You will then need to create a mechanism by which the old data values can be translated to their corresponding new values. Traditionally, the translation logic is usually incorporated into the loading program (SQR) so that the data is changed as the data is loaded into the system. Unfortunately, this approach has some drawbacks: (a) it adds a considerable amount of time to the programming effort and (b) it is inflexible in terms of allowing frequent changes to the translation logic.[5] A simpler approach would be to use Microsoft Access, Excel or FoxPro to quickly and easily put together the translation mechanism. In this illustration, we will be using Access as our tool of choice. We will create an application that will (a) translate fields and (b) create a new data conversion file.

Continuing with our example, let's assume that the client has the following requirements:

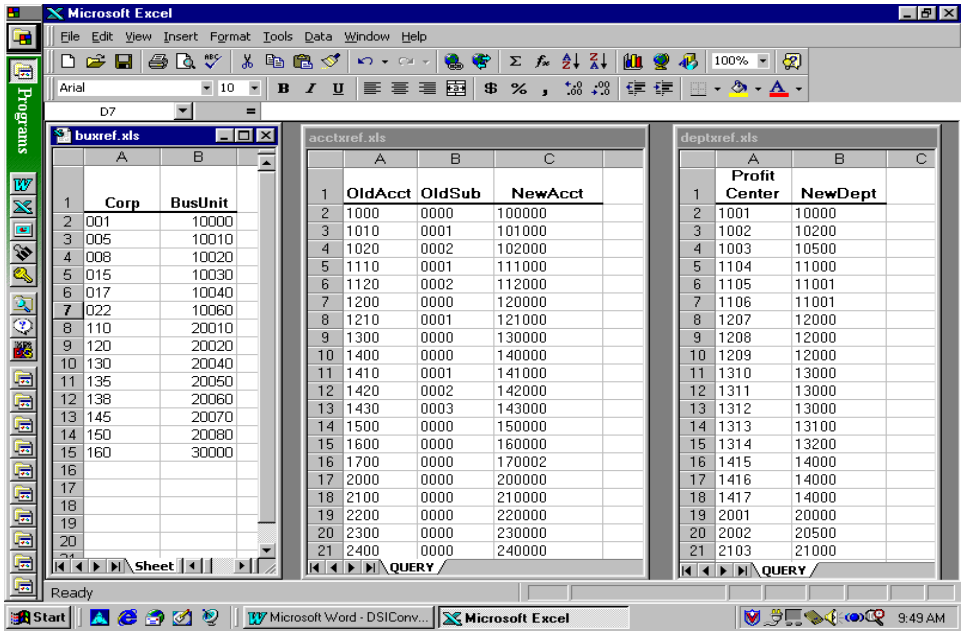
(a) Translate their CORP to a 5-character BUSINESS UNIT.
(b) Combine their ACCOUNT and SUB_ACCOUNT to a new 6-digit ACCOUNT.
(c) Translate their PROFIT_CENTER to a new 6-digit DEPARTMENT.
(d) Convert their separate DR/CR AMOUNT to a positive/negative MONETARY AMOUNT.

Following are the steps to implement these translations:

1.0 **Assemble all the translation matrices (F).**

1.1 The functional consultant will need to work closely with the users to put together their translation matrices. These may also be deliverables from the Fit/Gap phase, and are usually in spreadsheet form. In our example we have three translation spreadsheet:
1.1.1 BUXREF.XLS – translate CORP to BUSINESS UNIT
1.1.2 ACCTXREF.XLS – translate ACCOUNT and SUB-ACCOUNT to new ACCOUNT.
1.1.3 DEPTXREF.XLS – translate PROFIT CENTER to DEPARTMENT.

[5] Experience has shown that translation tables are **never** finalized during development, so you will need a process which will allow you to continually keep refreshing your translation tables with little effort.



2.0 Create the Access Translation Application (T/F).

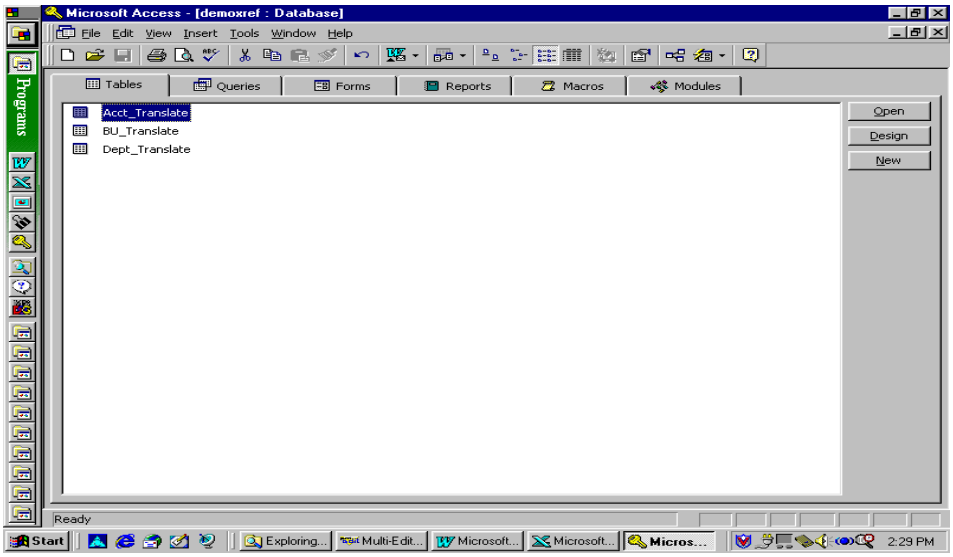
2.1 Import the translation spreadsheets as tables in an Access database. You can import spreadsheets in Access by clicking on **File, Get External Data, Import,** then choosing File Type **Excel Spreadsheet (.xls)** and stepping through the Import Wizard panels. In our example, we created three tables from the three translation spreadsheets:

2.1.1 BU_TRANSLATE (BUXREF.XLS)

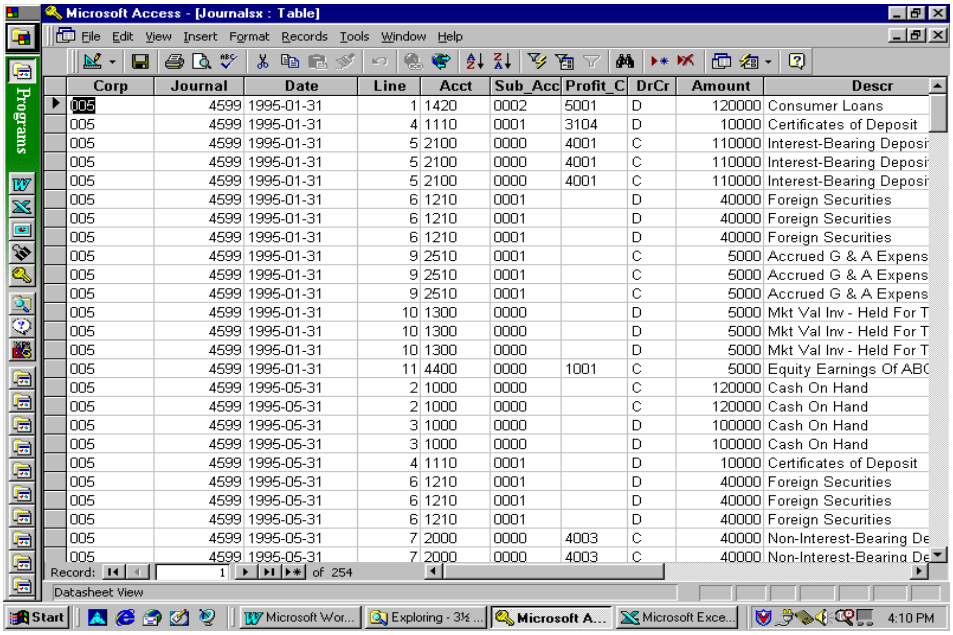
2.1.2 ACCT_TRANSLATE (ACCTXREF.XLS)

2.1.3 DEPT_TRANSLATE (DEPTXREF.XLS).

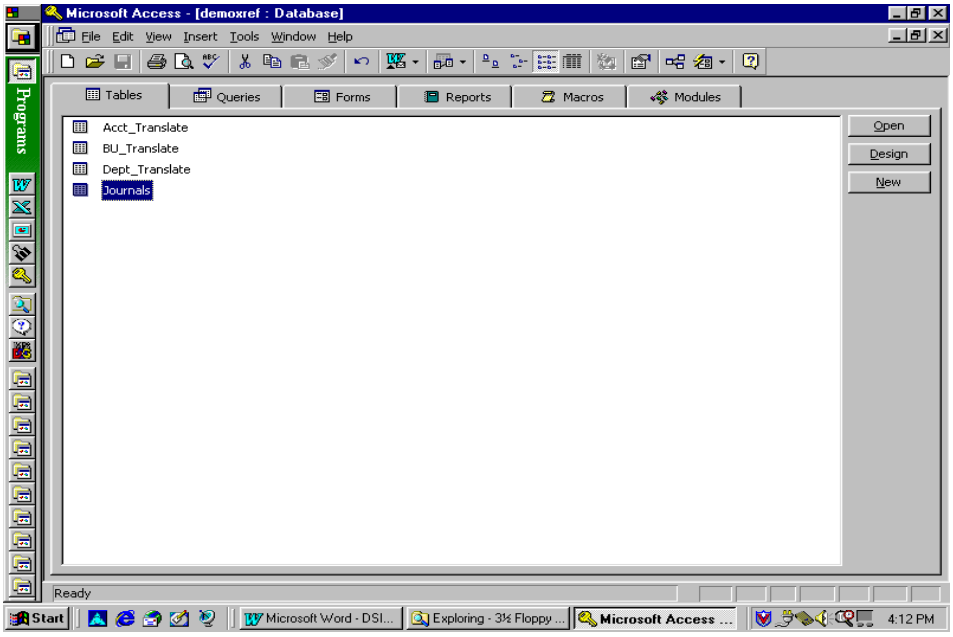
In the end you will have a table for each of the translation matrices:



2.2 Import the Journal conversion data file as tables in the Access database. You can import text files by clicking on **File, Get External Data, Import,** then choosing File Type **Text Files (.txt, .prn, etc.)** and stepping through the Import Wizard panels.

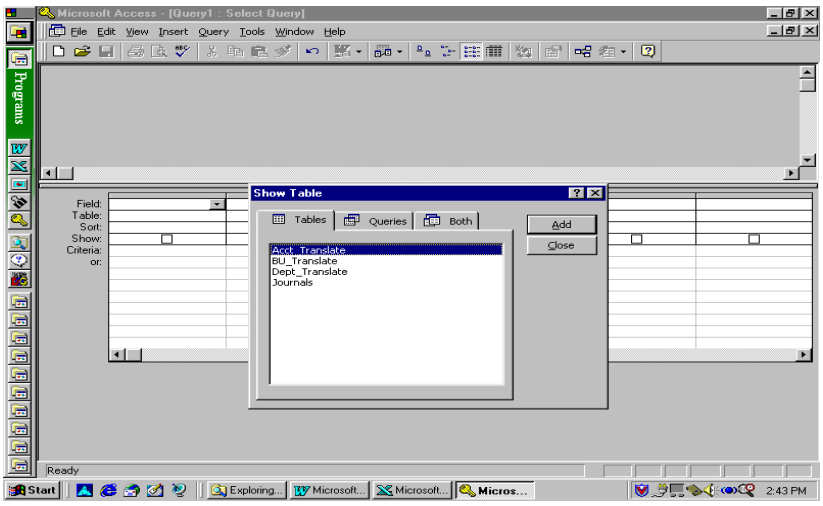


2.3 In the end you will have three **translation tables** (BU_TRANSLATE, ACCT_TRANSLATE and DEPT_TRANSLATE) and one **data table** (JOURNALS):



3.0 Create a Translation Query for the object (T/F).

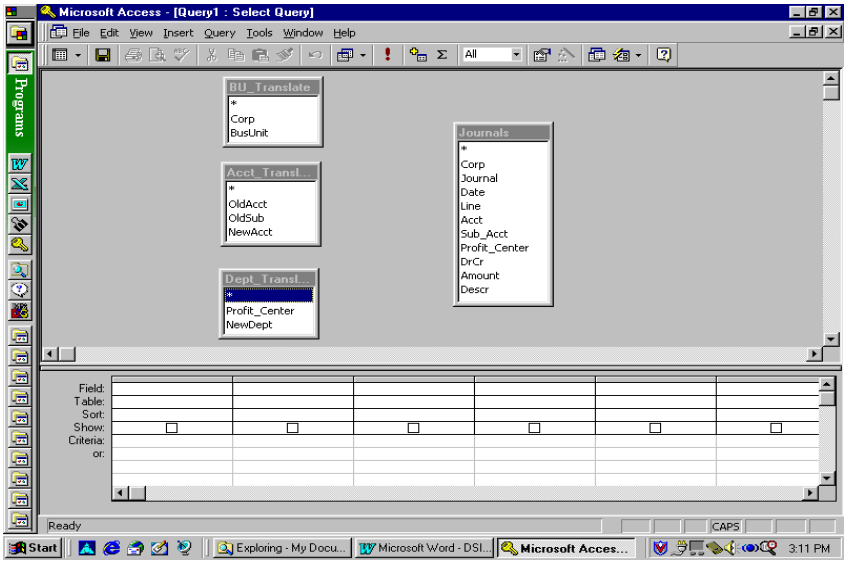
3.1 In order to substitute the values in the Journal data with the new translated values, you will need to create an Access query. *A query in Access is similar to a query in PeopleSoft: you will select what tables you want, how they will be joined and what fields to include.* Go to the Query tab in Access and hit the 'NEW' button. Choose **Design View** from the prompt. You will be prompted for what tables you want included in this query:



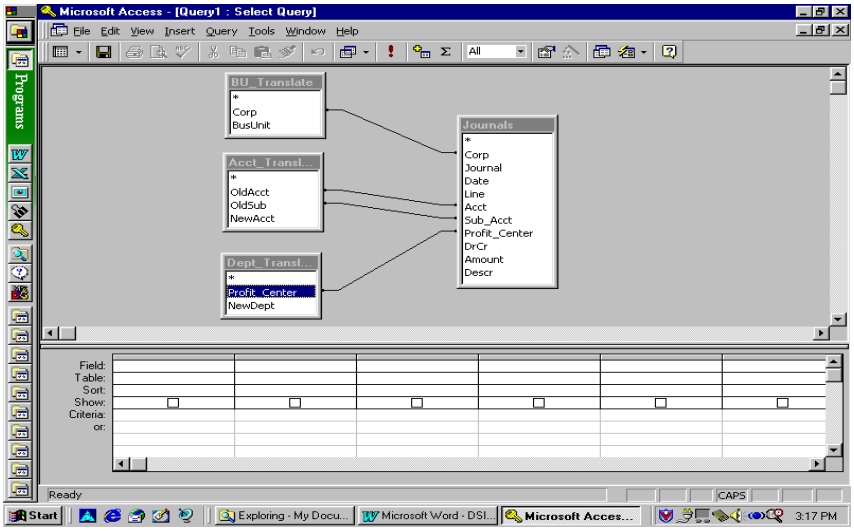
3.2 Select all the tables by double-clicking on each one. Hit CLOSE. Arrange the tables so that all the translation tables are on one side and the data table is on the other:

3.3 The fields to be translated in the JOURNAL data table are CORP, ACCT, SUB_ACCT and DEPARTMENT. Each of these fields has a counterpart in each of the translation tables, as follows:

Translation Table	Data Table
BU_TRANSLATE.CORP	JOURNALS.CORP
ACCT_TRANSLATE.OLDACCT	JOURNALS.ACCT
ACCT_TRANSLATE.OLDSUB	
JOURNALS.SUB_ACCT	
DEPT_TRANSLATE.PROFIT_CENTER	
JOURNALS.DEPARTMENT	

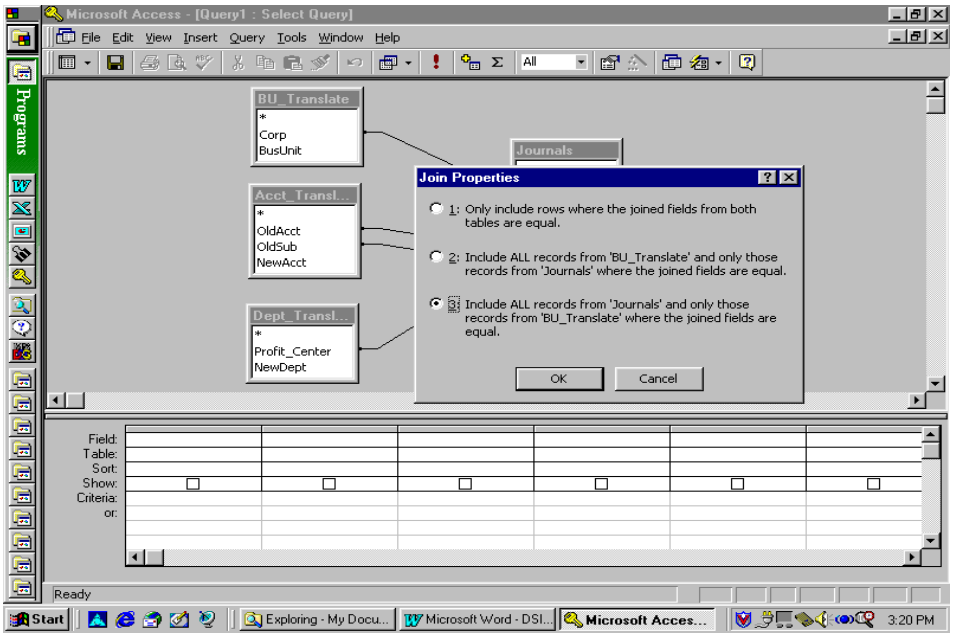


3.4 Drag each of the fields from the translation tables to their counterparts in the data table. This will create a double-headed arrow between the fields, which represents a join:

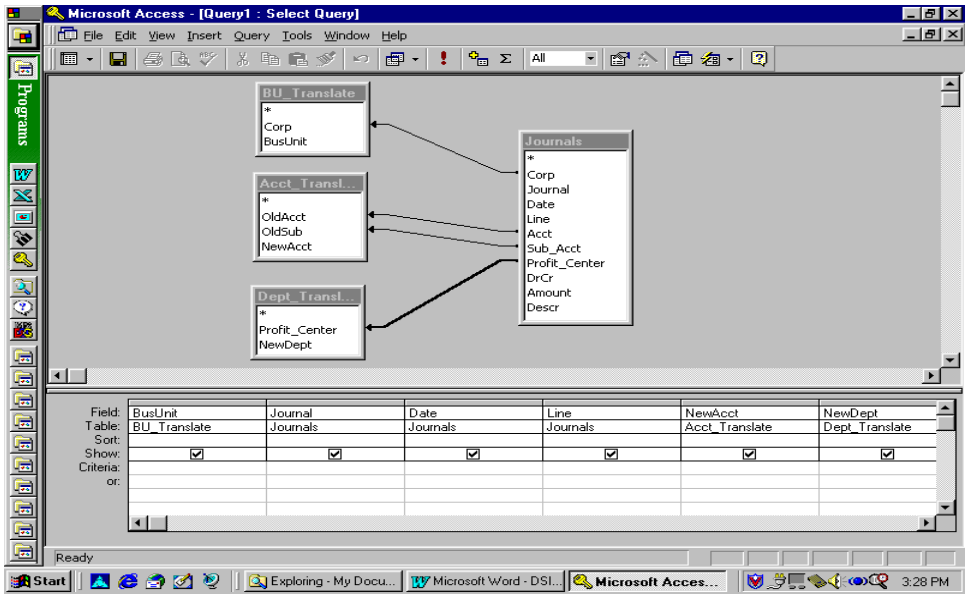


3.5 Right-click on each of the links and click on **Join Properties.** A prompt box with three join options will display. Since we are converting the

Journal data, we want to make sure that every record in the JOURNALS table is included in this query. So, select the **"Include ALL records from 'Journals'…"** option and click OK.

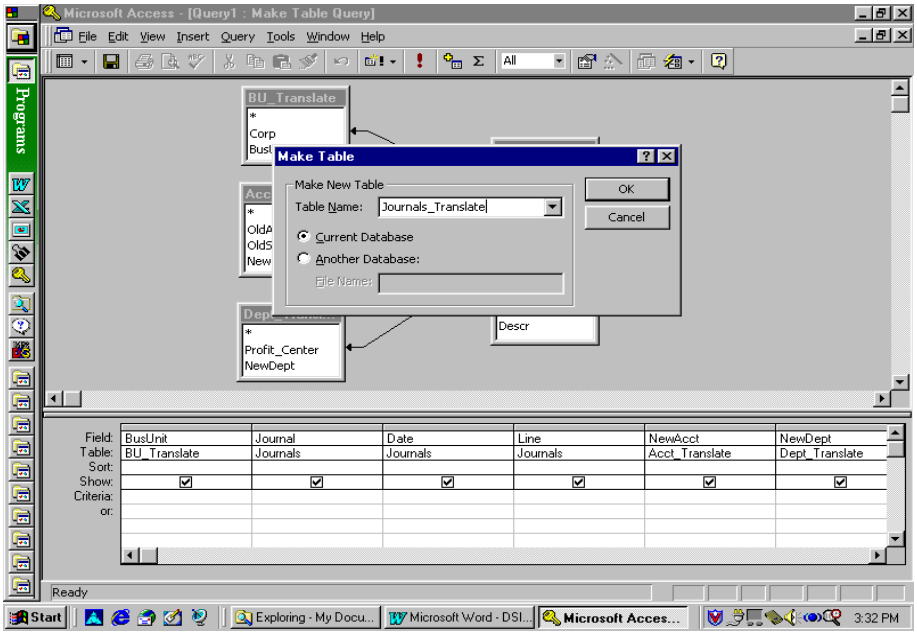


3.6 Repeat this step for each of the links.



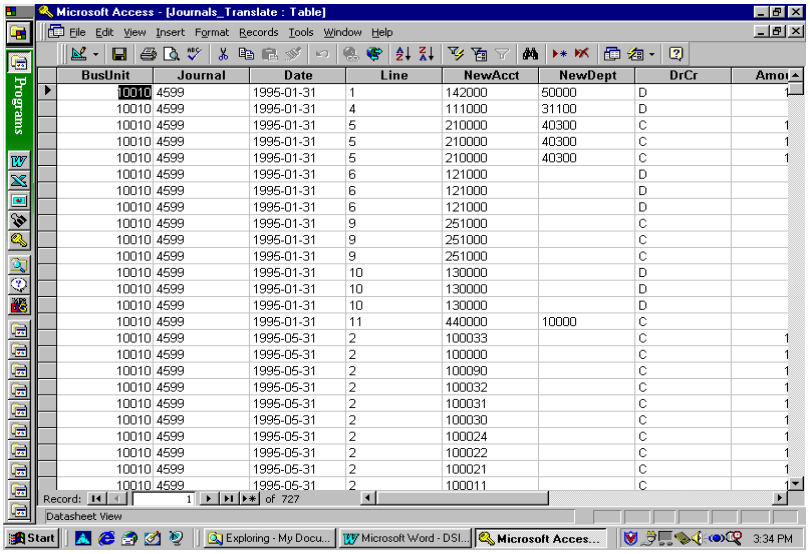
3.7 You are now ready to select the fields to include in the new text file which will be created from this application. Drag and drop the appropriate fields from each of the tables to the grid below. Select the translated version of the CORP, ACCOUNT and PROFIT CENTER fields from the translation tables, as well as the rest of the non-translated fields from the data table.

3.8 From the menu bar, select **Query, Make-Table Query.** This option causes the query to create a new table based on the query you assembled. Enter the name of the new table, which we will call JOURNALS_TRANSLATE, and hit OK.



3.9 Save the query.

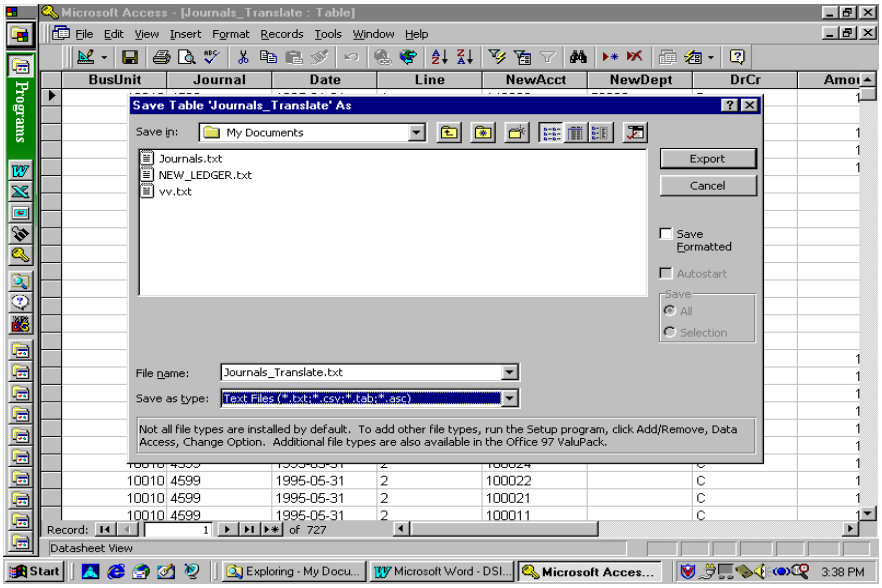
3.10 Run the query by hitting the **!** button. This will generate a new table called JOURNALS_TRANSLATE:



3.11 Note how CORP, ACCOUNT/SUB-ACCOUNT and PROFIT CENTER have been translated to BUSINESS UNIT, ACCOUNT and DEPARTMENT.

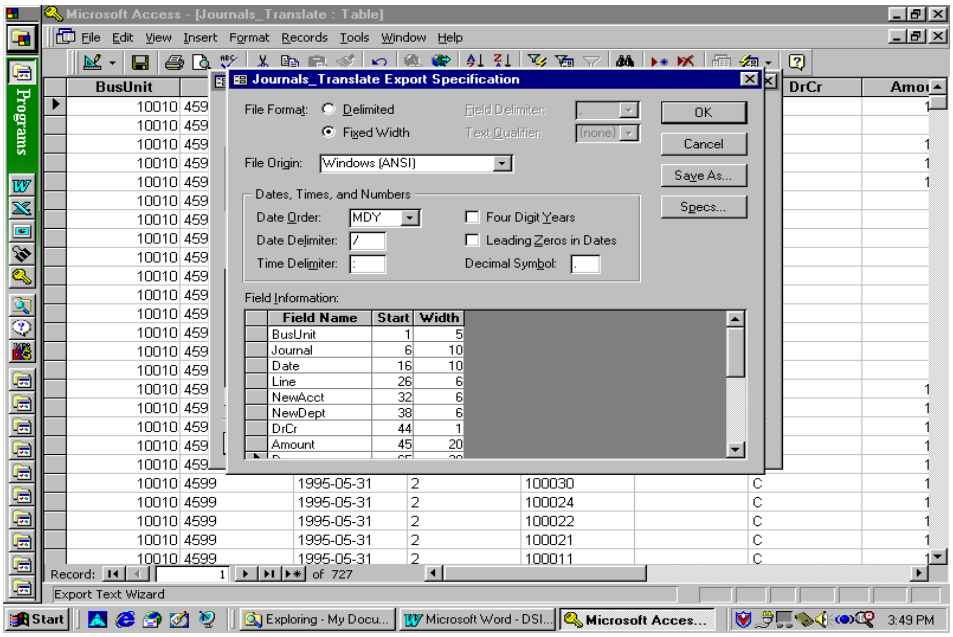
4.0 Create a new file to be loaded to PeopleSoft (T/F).

4.1 You are now ready to create a new data file containing the translated values. Highlight the JOURNALS_TRANSLATE table. Click on **File, SaveAs/Export, To an External File or Database.** Choose **Text Files** from the **Save as Type** box. Enter a file name and hit the EXPORT button.

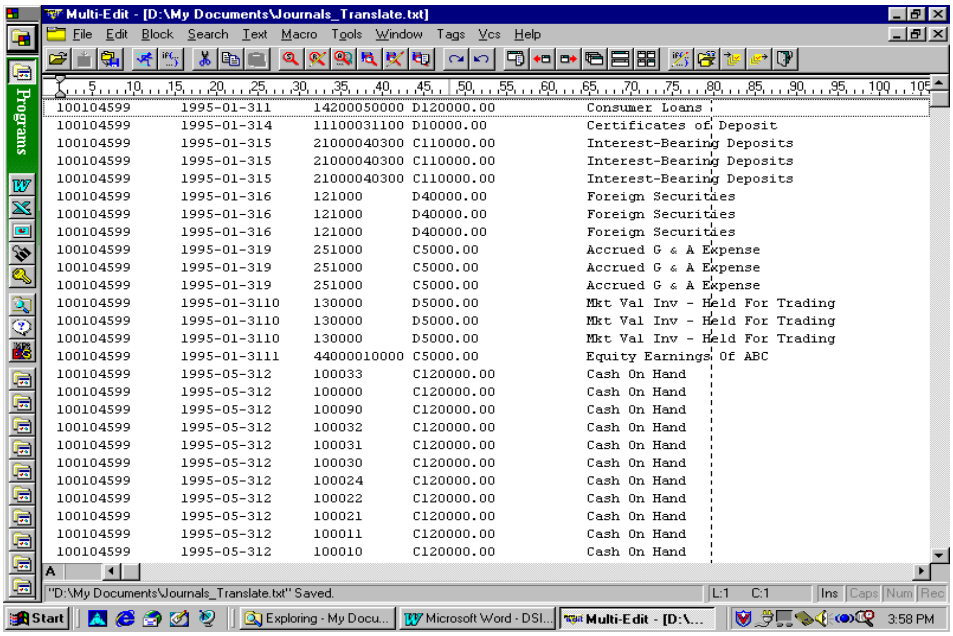


4.2 Hit the ADVANCED button. Click on FIXED WIDTH next to FILE FORMAT.

4.3 In the FIELD INFORMATION grid, you will need to replace the default start and length values of each of the fields with more accurate values:



4.4 Hit OK, then follow the Export Wizard prompts to the end. Hit FINISH and a new, translated text file will be created. Edit the file to verify the results.



4.5 Repeat the translation process for each of the objects. When you are finished, you should have a set of new text files containing translated values. Proceed to the next phase.

Phase 3: Data Scrubbing

Not all the data from the legacy system should be transferred to PeopleSoft. There are some records that should be filtered out, which generally fall under one of the following categories:

(a) Invalid Data
(b) Duplicate records
(c) Outdated information

The process of eliminating unwanted data prior to loading is called **scrubbing** the data. Traditionally, logic to scrub the data is incorporated into the loading programs by means of selection criteria. *This is still a good practice, as it does not require much effort to add such logic.* However, there are some cases where it would be easier to do the scrubbing outside of the loading programs. These include:

(a) If the data was created using a **translation query** (See Phase 2), it would be a simple matter to incorporate the filtering process into the query.
(b) If programming resources are limited and the functional consultant would be required to perform this step.
(c) If the object only involves loading a single table, so that the Import Manager utility can be utilized (that is, the data to be imported must have already been scrubbed).

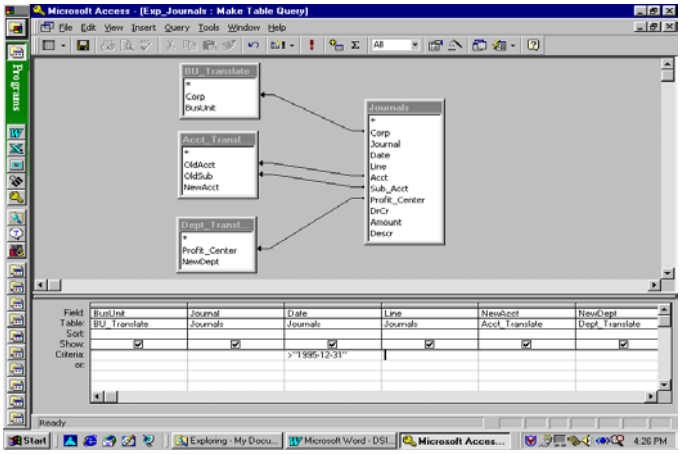
There are several ways to scrub data in Access; however, a complete tutorial on the functionality of Access is outside of the scope of this document. We will focus on a few examples:

(a) Exclude all journals prior to 1996.
(b) Exclude all journals with zero amounts.

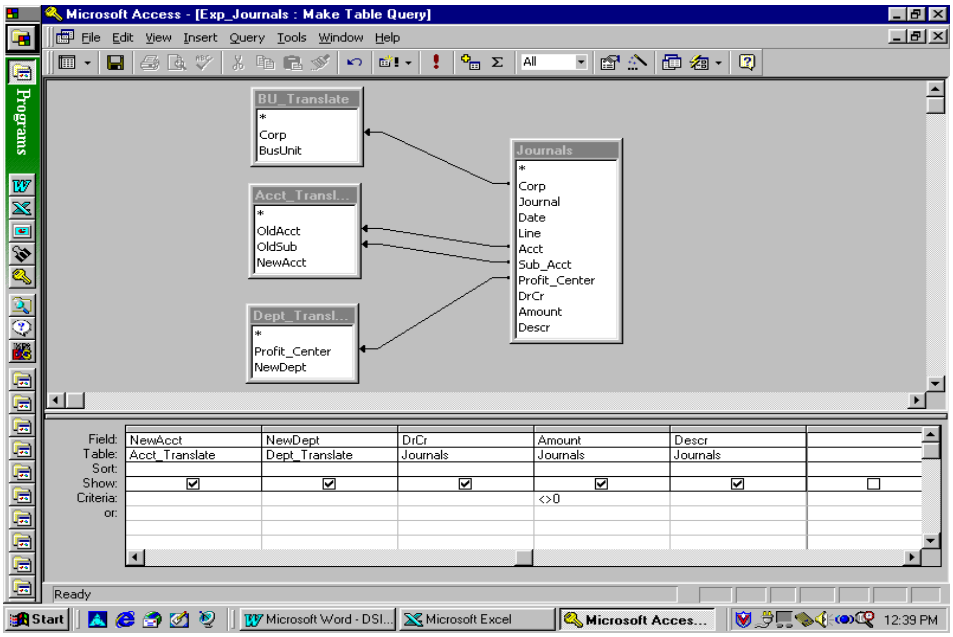
1.0 **Modify the translation query to add filtering logic (T/F).**

1.1 Highlight the translation query and hit the DESIGN button.

1.2 In the grid below, add the necessary filtering logic in the CRITERIA section of the field being evaluated. In this case, add **>"1995-12-31"** in the criteria for the DATE field.



1.3 To exclude zero amount journals, add the criteria **<>0** in the CRITERIA section for the AMOUNT field.



2.0 **Rerun the query and repeat the Export process.**

Phase 4: Data Verification

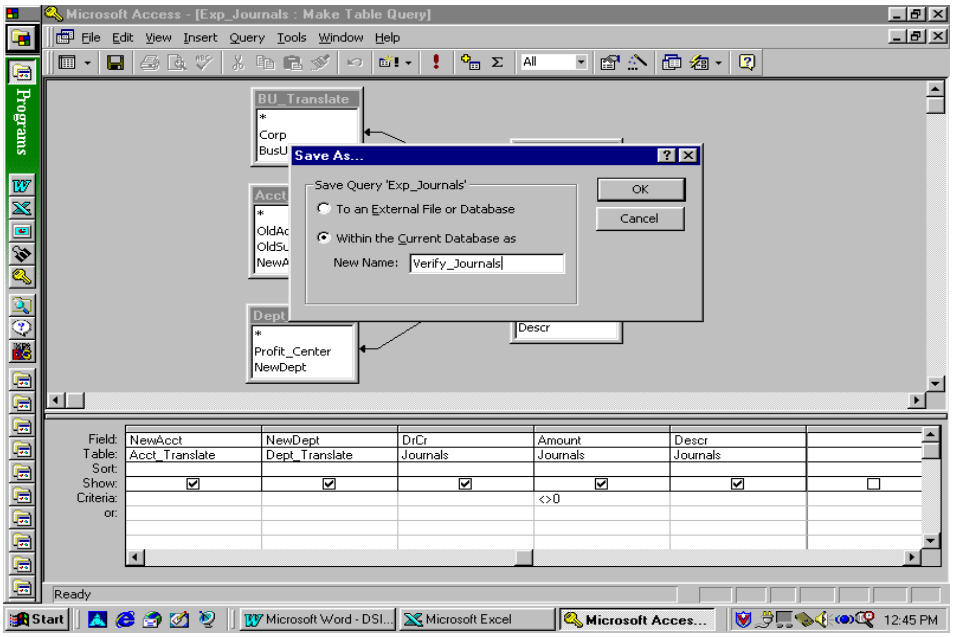
Before loading the data to PeopleSoft, you will need to verify the accuracy of the information that has been exported from the legacy system. Also, in the case of translated data, you want to make sure that the information was translated properly (see Phase 2: Data Translation). Traditionally, some sampling or manual editing of the data would be performed to do a final check prior to loading. Obviously, such a process would be time-consuming and still leave room for errors to creep in. Once again, Access can help you by enabling you to analyze the data to be loaded.

For our example, let's assume we want to check the Journal data for the following conditions:

(a) Correct Total Debits and Credits by Business Unit
(b) No missing Account translations

1.0 **Verify Control Totals (T/F).**

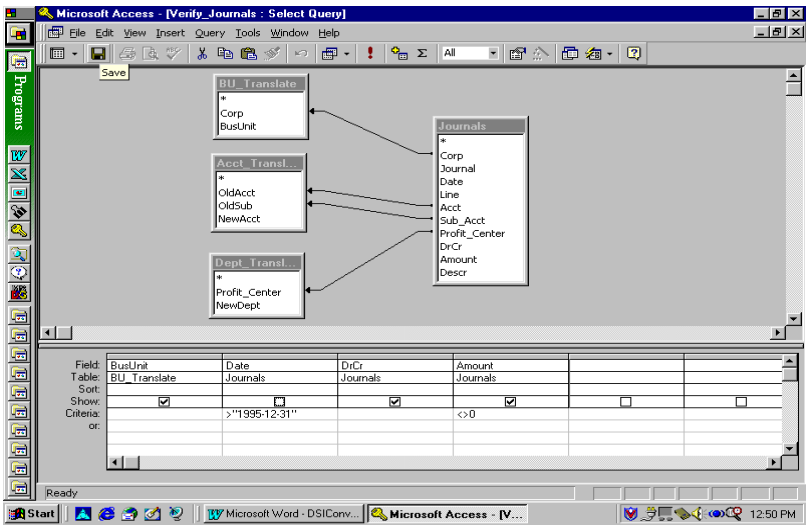
1.1 Use the same translation query you created in Phase 2. Open the query and do a **File, Save As,** and give the query a new name, such as



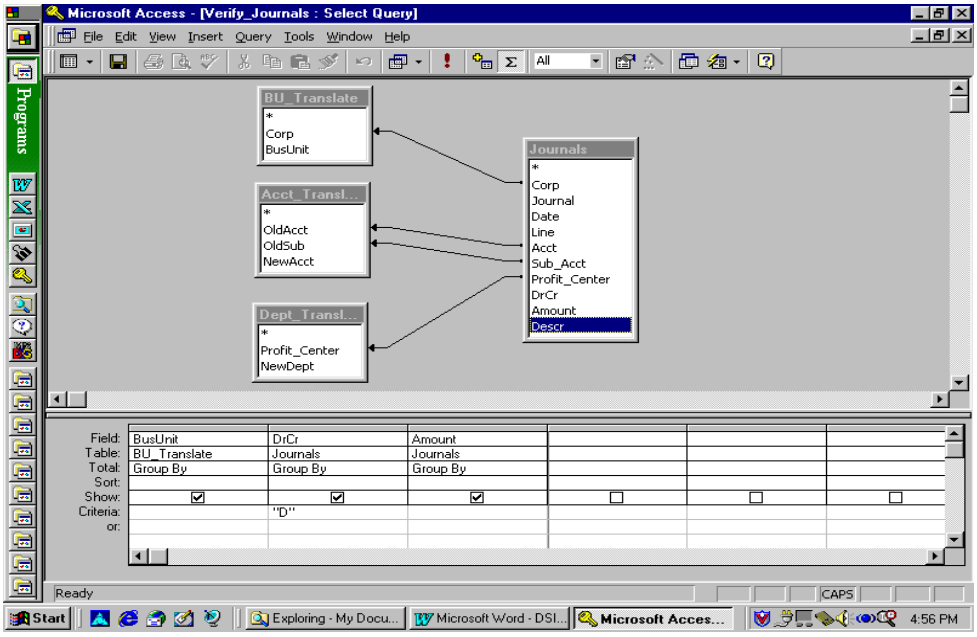
VERIFY_JOURNALS.

1.2 Click on **Query, Select Query** so that the query will not create a new table.

1.3 Delete all the fields that are not necessary for the purpose of getting total amounts from the grid. In this example you will only need the BU_TRANSLATE.BUSINESS UNIT, JOURNALS.DRCR and JOURNALS.AMOUNT fields. You will also need to retain the JOURNALS.DATE field in order to continue filtering out journals prior to 1996 (see Section 3: Data Scrubbing). However, to prevent the DATE field from being included in the query results, simply uncheck the check box in the SHOW section :

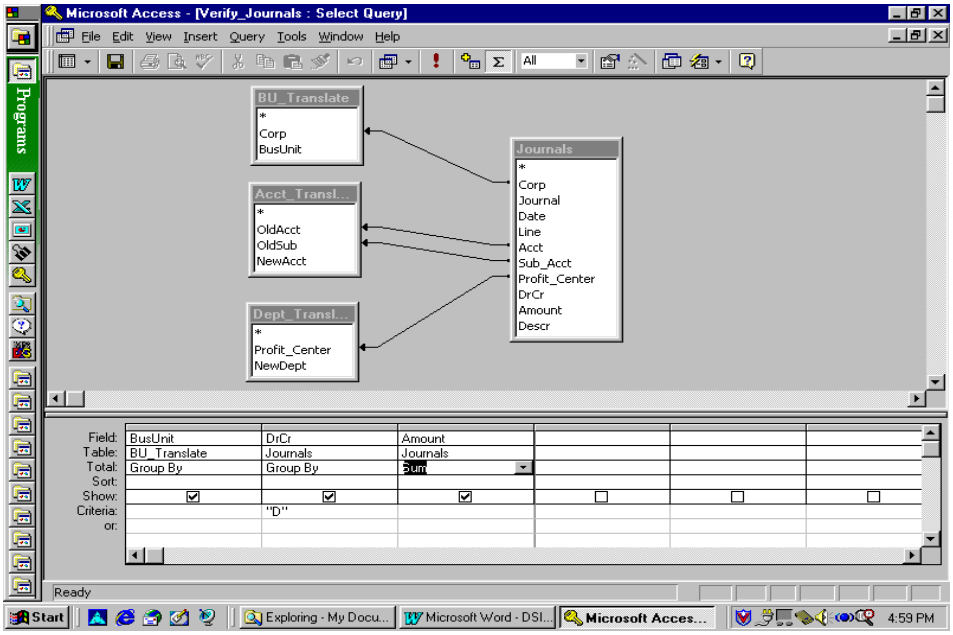


1.4 Hit the Σ (Totals) button on the toolbar. This will group all the journal information by the remaining fields by adding the “GROUP BY” option in the TOTALS section of the grid:

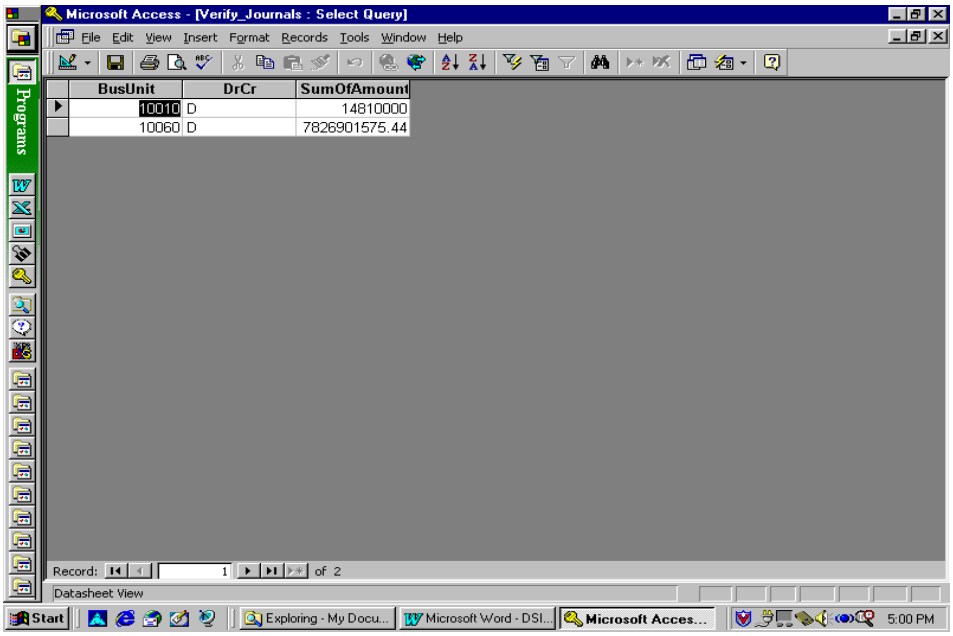


1.5 Replace the “GROUP BY” option for the AMOUNT field with the “SUM” option.

1.6 Add a ‘D’ to the CRITERIA section of the DRCR field so that we can query on all debits first.



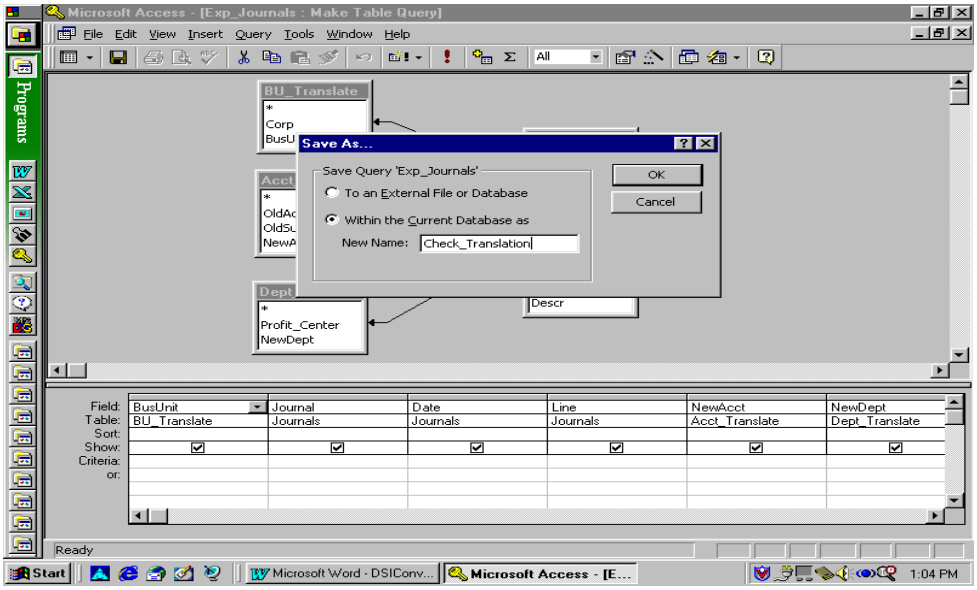
1.7 Run the query by hitting the **!** button. You will get the total debits amount for each Business Unit:



1.8 Repeat the above steps for the total credits amount by replacing the 'D' in the DRCR CRITERIA section with a 'C'.

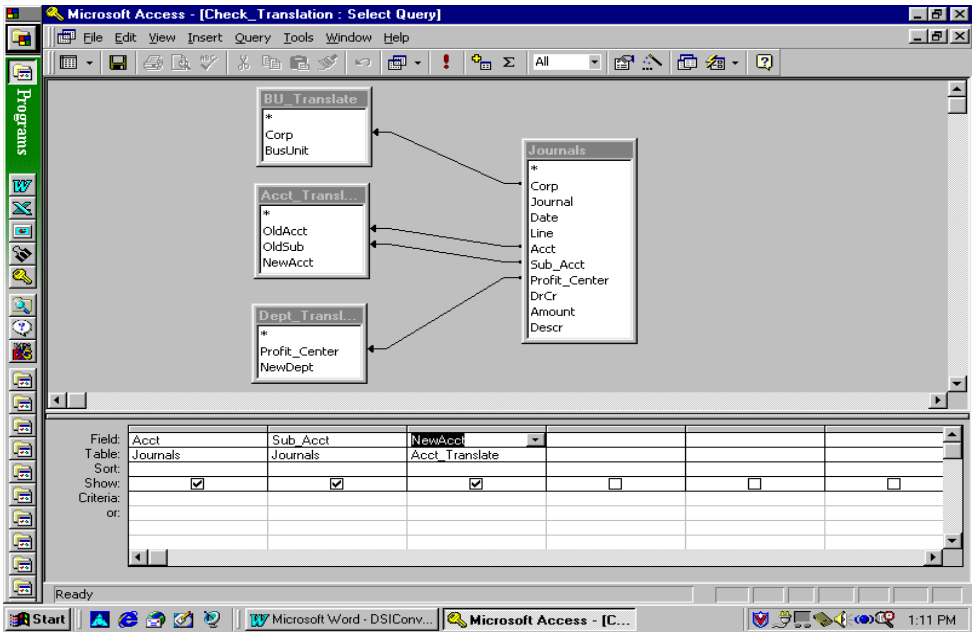
2.0 **Check for missing account translations:**

2.1 If for some reason any of the Journal lines contains a CORP, ACCOUNT/SUB-ACCOUNT or PROFIT CENTER that is not accounted for in their respective translation tables, the data would be invalid. To check for this condition, use the same translation query you created in Phase 2. Open the query and do a **File, Save As,** and give the query a new name, such as 'CHECK_TRANSLATION'.

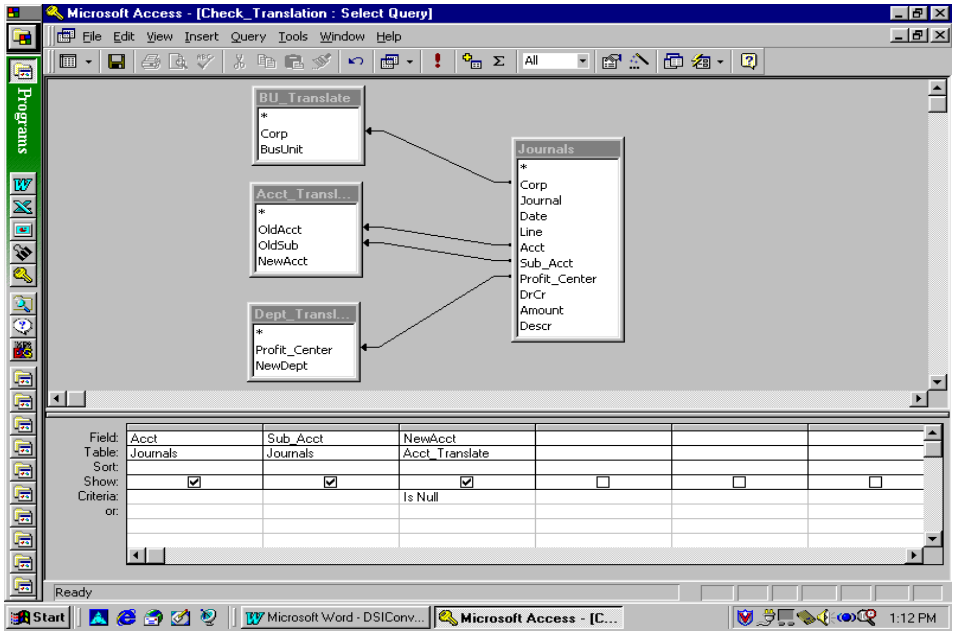


2.2 Click on **Query, Select Query** so that the query will not create a new table.

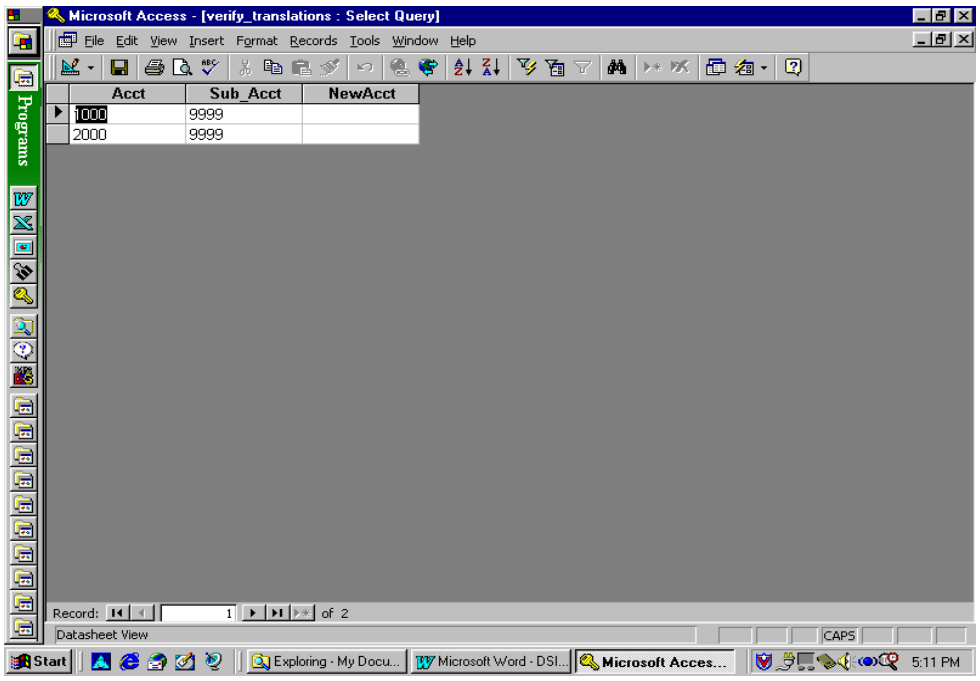
2.3 We will check for non-translated ACCOUNTS. Delete all the fields that are not necessary and add back the fields containing the non-translated values. In this example you should only have the JOURNALS.ACCT, JOURNALS.SUB_ACCT and ACCT_TRANSLATE.NEWACCT fields left.



2.4 In the CRITERIA section of the NEWACCT field, enter “IS NULL”. This criteria will search for all the translated Journal records where the NEW ACCOUNT is blank; that is, records that contained ACCOUNT/SUB-ACCOUNT combinations that were not in the ACCT_TRANSLATE table.



2.5 Hit the **!** button. Records with ACCOUNT/SUB-ACCOUNT combinations with no corresponding NEW ACCOUNT will display:



2.6 Go back to the translation table and add the missing information.

2.7 Rerun the query. If all translations are accounted for, then the query will have zero records.

2.8 You can do this type of translation checking for any of the other fields (CORP and PROFIT_CENTER).

Phase 5: Data Loading

In this phase, the data is actually loaded into the new system. PeopleSoft offers a variety of ways for bringing data in, but the most common tools are **SQRs** and **Import Manager.** The choice of which to use depends on the following:

(a) **Volume of data** – Import Manager takes much more time to run than an SQR. For large quantities of data it may be more appropriate to use an SQR.

(b) **Level of editing** – For some types of data, it would be more feasible to use the Import Manager because it thoroughly edits the data as it is loaded.

(c) **Table dependencies** – If only a single table is associated with an object, it may be easier to use the Import Manager. However, for multiple tables with Parent/Child relationships, it would be more prudent to use an SQR in order to preserve relational integrity.

For our illustration, we will use SQRs; more specifically, **generic data loader SQRs.** A generic data loader SQR performs two basic functions:

(a) Reads the conversion data file from the legacy system.
(b) Loads that data into the appropriate PeopleSoft tables.

Recall that in Phase 1, we captured all the SQL statements associated with inserting an object. We then formatted that information into a spreadsheet which we used for mapping to the legacy system. We can now take that spreadsheet and use it along with a generic data loader SQR to dramatically simplify the programming effort.

1.0 Get a copy of the generic data loader SQR (T).

1.1 Below is a sample which you can cut & paste to a text file:

```
!-----------------------------------------------------------------------!
! Report Name: DATALOAD.SQR                                             !
! Purpose: Generic data loader that reads a flat file, parses the data,!
!          and loads to a single table (may be modified to incorporate !
!          multiple tables to maintain relational integrity). Complete !
!          the following steps to tailor this program to existing      !
!          needs:                                                      !
!          1) Change the default input file name.                      !
!          2) Set appropriate default values for constants.            !
!          3) Modify parsing logic to current file layout.             !
!          4) Cut & Paste SQL Insert statement from trace file.        !
!          5) Modify SQL Insert to incorporate parsed variable names.  !
!-----------------------------------------------------------------------!
#include 'setenv.sqc'   !Set environment procedure
#include 'setup01.sqc'  !printer and page-size initialization

begin-report
  do Set-File-Input
  do Parse-Input-File
  do Close-Files
 end-report

begin-procedure Set-File-Input
      do Init-DateTime
! Get Filename for ASCII input
   input $filename 'Input FileName to Load (i.e. cbc.txt) or Q to Quit' type=char
   if $filename = 'Q' or $filename = 'q'
      stop
   end-if
!***********************************************************************!
! STEP 1: CHANGE DEFAULT INPUT FILE NAME.                               !
!***********************************************************************!
   if $filename = ''
      let $filename = 'c:\stage\actualsbal\1998\1998.txt'
   end-if

                                       ul
      open $filename as 100 for-reading record=250:vary status=#filestat
end-procedure

begin-procedure Parse-Input-File
!***********************************************************************!
! STEP 2: SET DEFAULT VALUES FOR CONSTANTS.                             !
!***********************************************************************!
     let $FIELD_A = ' '
```

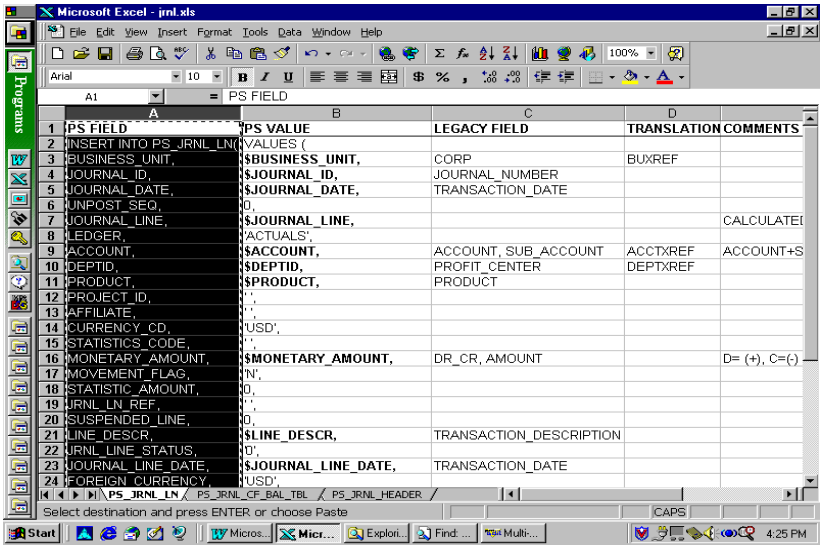
```
     let $FIELD_B = ' '
     let #PROCESS_INSTANCE = 0
    do Format-DateTime('19991001', $out, {DEFCMP},'','native')
    let $DTTM_STAMP_SEC = $out
    while 1 = 1
!*********************************************************************!
! STEP 3: MODIFY PARSING PARAMETERS TO CURRENT FILE LAYOUT.           !
!*********************************************************************!
    read 100 into $FIELD1:10 $FIELD2:5 $FIELD3:20 $FIELD4:10 $FIELD5:4 $FIELD6:2
        let $FIELD1 = rtrim($FIELD1,' ')
        let $FIELD2 = rtrim($FIELD2,' ')
        let $FIELD3 = rtrim($FIELD3,' ')
        let $FIELD4 = rtrim($FIELD4,' ')
        let $FIELD5 = rtrim($FIELD5,' ')
        let $FIELD6 = rtrim($FIELD6,' ')

! Make sure no parsed value resulted in null.
       if $FIELD1 = ''
          let $FIELD1 = ' '
       end-if
       if $FIELD2 = ''
          let $FIELD2 = ' '
       end-if
       if $FIELD3 = ''
          let $FIELD3 = ' '
       end-if
       if $FIELD4 = ''
          let $FIELD4 = ' '
       end-if
       if $FIELD5 = ''
          let $FIELD5 = ' '
       end-if
       if $FIELD6 = ''
          let $FIELD6 = ' '
       end-if
       if #end-file = 1
         break
       end-if
    do Insert-PS-Record
  end-while
end-procedure

begin-procedure Insert-PS-Record
!*********************************************************************!
! STEP 4: ADD TABLE NAME & PASTE SQL INSERT STATEMENT FROM TRACE FILE. !
!*********************************************************************!
begin-SQL on-error=SQLError
!*** PASTE COLUMN A FROM MAPPING SPREADSHEET HERE***
!*********************************************************************!
! STEP 5: MODIFY VALUES CLAUSE TO INCORPORATE PARSED VARIABLE NAMES.   !
!*********************************************************************!
!*** PASTE COLUMN B FROM MAPPING SPREADSHEET HERE***
end-SQL
end-procedure

begin-procedure SQLError
display 'Processing SQLError'
  evaluate #sql-status
    when = -99999  !Token "when" clause for non-DB2 environments
    when-other
      display $sqr-program noline
      display ': ' noline
      display $ReportID noline
      display ' - SQL Statement = '
      display $SQL-STATEMENT
      display 'SQL Status =' noline
      display #sql-status 99999 noline
```

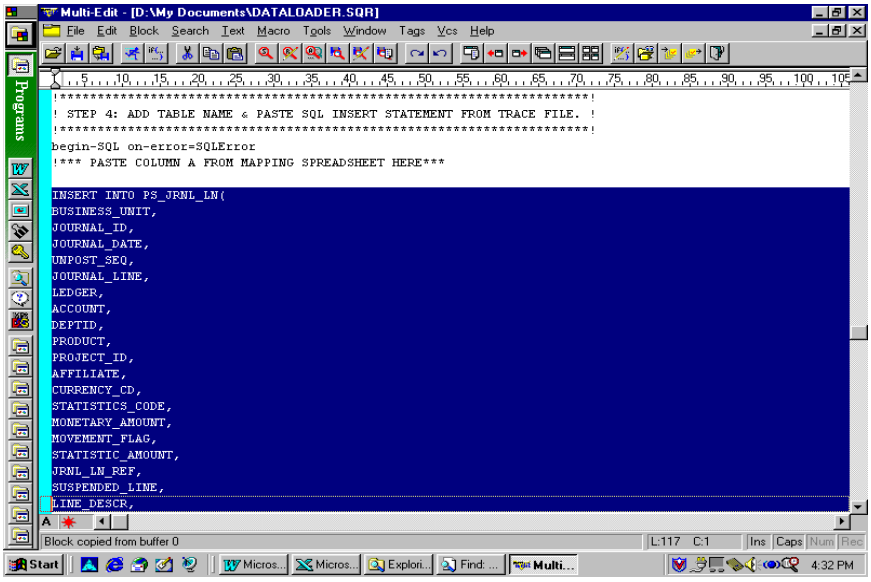
```
      display ' ' noline
      display 'SQL Error  = ' noline
      display $sql-error
      do Rollback-Transaction
      stop
  end-evaluate
end-procedure

begin-procedure Close-Files
 close 100
end-procedure
!-----------------------------------------------------------------------!
! Called SQC Procedures                                                 !
!-----------------------------------------------------------------------!
#include 'reset.sqc'     ! Reset printer procedure
#include 'prcsapi.sqc'   ! Update process Request API
#include 'prcsdef.sqc'   ! Update Process Request variable declare
#include 'askeffdt.sqc'  ! Ask Effective Date
#include 'curdttim.sqc'  ! Get-Current-DateTime procedure
#include 'datetime.sqc'  ! Routines for date and time formatting
#include 'number.sqc'    ! Routines to format numbers
#include 'tranctrl.sqc'  ! Tools transaction control module
```

1.2 Follow the steps in the comment boxes to prepare the SQR:
- 1.2.1 Change the default input file name.
- 1.2.2 Set default values for constants.
- 1.2.3 Modify parsing parameters to current file layout.
- 1.2.4 Do a **File, Save As** and rename the SQR to JOURNALS.SQR.

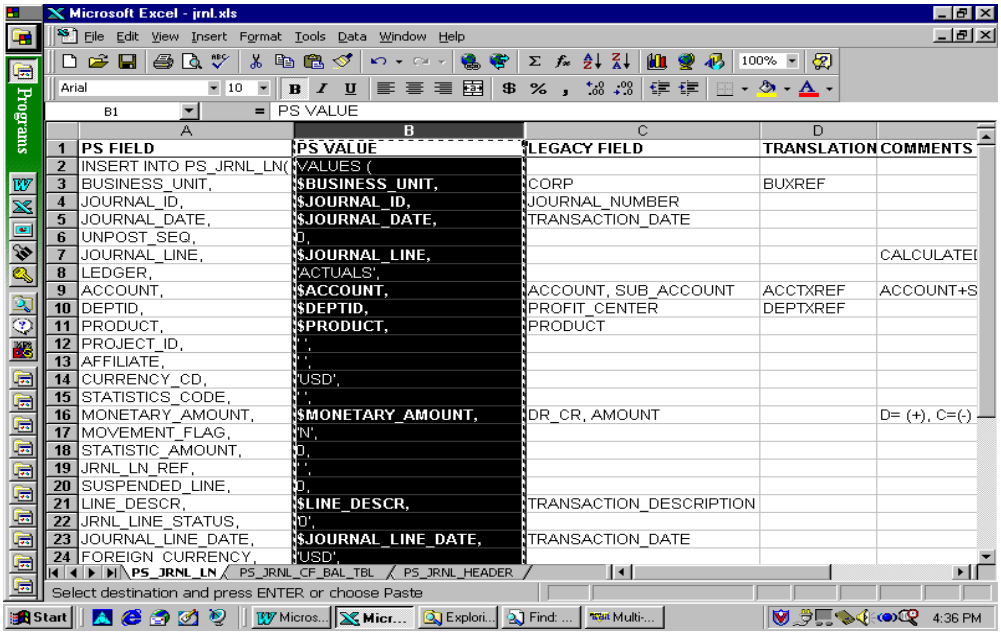
1.3 Highlight Column A from one of the worksheets from the mapping spreadsheet you created in Phase 1. Click on **Edit, Copy.**

1.4 Paste the column into the JOURNALS.SQR, in the section marked ***** PASTE COLUMN A FROM MAPPING SPREADSHEET HERE. *****



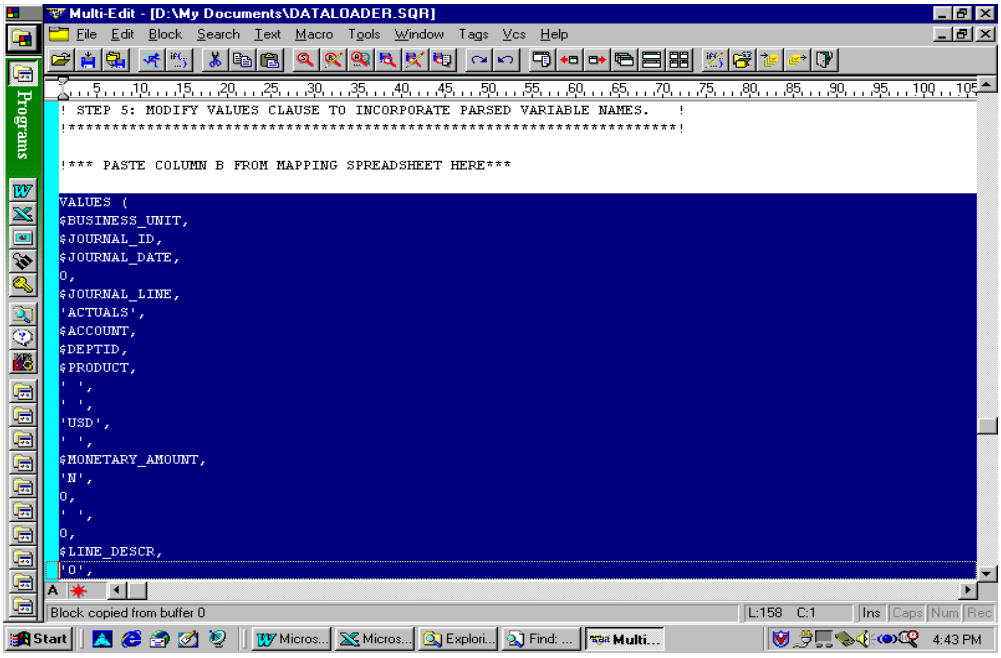


1.5 Highlight Column B from mapping spreadsheet. Click on **Edit, Copy.**



	A	B	C	D	
1	PS FIELD	PS VALUE	LEGACY FIELD	TRANSLATION	COMMENTS
2	INSERT INTO PS_JRNL_LN(	VALUES (			
3	BUSINESS_UNIT,	$BUSINESS_UNIT,	CORP	BUXREF	
4	JOURNAL_ID,	$JOURNAL_ID,	JOURNAL_NUMBER		
5	JOURNAL_DATE,	$JOURNAL_DATE,	TRANSACTION_DATE		
6	UNPOST_SEQ,	0,			
7	JOURNAL_LINE,	$JOURNAL_LINE,			CALCULATE(
8	LEDGER,	'ACTUALS',			
9	ACCOUNT,	$ACCOUNT,	ACCOUNT, SUB_ACCOUNT	ACCTXREF	ACCOUNT+S
10	DEPTID,	$DEPTID,	PROFIT_CENTER	DEPTXREF	
11	PRODUCT,	$PRODUCT,	PRODUCT		
12	PROJECT_ID,	' ',			
13	AFFILIATE,	' ',			
14	CURRENCY_CD,	'USD',			
15	STATISTICS_CODE,	' ',			
16	MONETARY_AMOUNT,	$MONETARY_AMOUNT,	DR_CR, AMOUNT		D= (+), C=(-)
17	MOVEMENT_FLAG,	'N',			
18	STATISTIC_AMOUNT,	0,			
19	JRNL_LN_REF,	' ',			
20	SUSPENDED_LINE,	0,			
21	LINE_DESCR,	$LINE_DESCR,	TRANSACTION_DESCRIPTION		
22	JRNL_LINE_STATUS,	'0',			
23	JOURNAL_LINE_DATE,	$JOURNAL_LINE_DATE,	TRANSACTION_DATE		
24	FOREIGN CURRENCY,	'USD',			

1.6 Paste the column into the JOURNALS.SQR, in the section marked ***
PASTE COLUMN B FROM MAPPING SPREADSHEET HERE. *



2.0 **Add final modifications to program (T).**

2.1 Make sure the parsing parameters exactly match the file layout of the data conversion file.

2.2 Verify that every variable parsed from the data file is checked for null values.

2.3 For objects with multiple tables:
- 2.3.1 Add additional INSERT procedures.
- 2.3.2 Add control breaking logic for Parent and Child records.
- 2.3.3 *Make sure the conversion data file sort matches your control break logic.*

2.4 Save the program.

2.5 Test, test, test!

2.6 If any of the default values in the SQR are incorrect, make the necessary modifications.

Conclusion

At the end of this process, you should have the following deliverables:

- A full set of data mappings for all tables associated with each object.
- Record layouts for all the conversion data files from the legacy system.
- SQRs to populate all objects for all modules.

Technical Architecture Assessment

Profile

LUCAS COUNTY, OHIO IS a mid-western county employing approximately 4400 individuals in various governmental departments. Currently, a substantial portion of Lucas County's applications runs in a mainframe environment. Lucas County has chosen to implement PeopleSoft HRMS and Financials packages to support their operations in the future. It is estimated that approximately 60 Financials users and 60 Human Resources users (the basis for which is discussed herein) will utilize the PeopleSoft environments.

Acuent has prepared the following report to enable the Lucas County to adequately plan for hardware needs relative to future PeopleSoft implementation of version 8.x Human Resources Management System (HRMS) and Financials. This report summarizes the background, issues, environment, and recommendations.

Executive Summary

A PeopleSoft Technical Assessment was performed at *LUCAS COUNTY* starting mid-February 2002. The engagement was to evaluate needs and provide hardware architectural recommendations for an implementation of PeopleSoft 8.0 for PeopleSoft Application HRMS and Financials environments using the PeopleSoft Internet Architecture.

This document was created based upon the results of oral interviews conducted at Lucas County, incorporation of PeopleSoft 8 system information, Unisys public documentation, research of PeopleSoft system requirements, and application of known best practices in the determination of PeopleSoft system requirements.

It should be noted, that within the scope of the original assessment, Acuent was to determine the technical requirements of the architecture for the Financials and HRMS systems. During the course of the assessment, considerable interest evolved from Lucas County regarding a particular hardware platform, namely, the Unisys ES 7000 data center. As a general concept, hardware assessments are vendor neutral and do not evaluate the merits of specific product. However, based upon the unique needs of Lucas County, Acuent provided additional support in this regard and evaluated the appropriateness of the particular hardware platform.

Acuent recommends that the following steps be taken in anticipation of a PeopleSoft 8.0 implementation:

General Considerations

In order to perform the implementation, Lucas County must establish Production system processing bandwidth (2465 MHz HRMS total, 1997 MHz Financials total) and memory of 8 GB on its chosen server hardware, by purchase of new equipment.
A significant quantity of end-user (power users) and developer workstations will need to be purchased or upgraded to 500 MHz+ processors with 128 to 256 MB of RAM.
Developer workstations must be equipped with Windows NT/2000 operating systems.
All other workstations, power user or otherwise, must be equipped Windows 98/NT/2000 to receive OS manufacturer and PeopleSoft technical support.
Internet Explorer, version 5.0 or 5.5 should be mandated for PeopleSoft 8 web browser use. Netscape Navigator, while supported, currently has known bugs that impede full PeopleSoft functionality and delivery.
Current network configuration is sufficient to support PeopleSoft 8 applications.

Hardware Platform Specific Considerations

To achieve the overall Lucas County server and application support centralization goals, it is recommended that Lucas County purchase a Unisys ES 7000 data center, utilizing the Microsoft 2000 DataCenter Server operating system and Microsoft SQL Server 2000 Enterprise database management software. To support concurrent operation of the Production/Development/ Testing/Demonstration environments, the unit should be configured with 10 X 1.7 GHz processors and 40 GB of RAM. This will provide sufficient resources for these environments and production fail-over.

To protect against total server failure, two additional conventional servers should be purchased configured with the Microsoft 2000 DataCenter Server operating system and Microsoft SQL Server 2000 Enterprise database management software. These units should be equipped with 4 X 500 MHz+ processors and 8 GB of RAM each. Additional processors and memory will be required to support Lucas County non-PeopleSoft application hosted on the data center. Acuent recommends that Lucas County consult directly with Unisys for server sizing and configuration, based upon their particular PeopleSoft experiences.

Alternative Hardware to support the Financials system could be comprised of four separate servers, utilizing Microsoft Windows 2000 Advanced Server and Microsoft SQL Server 2000 Enterprise equipped as follows:

- Application/Database/Web/Batch/Report Server
  - 4 X 700 MHz CPUs
  - 8 GB RAM
- Parallel Application/Database/Web/Batch/Report Server (DB fail-over)
  - 4 X 700 MHz CPUs
  - 8 GB RAM

- Development/Test/Demonstration Application/Database/Web/Batch/Report Server
    - X 700 MHz CPUs
    - 8 GB RAM
- File Server
    - X 1.2 GHz CPUs
    - GB RAM

Alternative Hardware to support the HRMS system could be comprised of four separate servers equipped as follows:

- Application/Database/Web/Batch/Report Server
    - 4 X 700 MHz CPUs
    - 8 GB RAM
- Parallel Application/Database/Web/Batch/Report Server (DB fail-over)
    - 4 X 700 MHz CPUs
    - 8 GB RAM
- Development/Test/Demonstration Application/Database/Web/Batch/Report Server
    - 2 X 700 MHz CPUs
    - 8 GB RAM

PeopleSoft Components

The hardware and software Lucas County will need to purchase, install, and test before installing PeopleSoft applications depends on the particular PeopleSoft configuration are chosen. The components to consider include:

Client Workstations:

Lucas County will need a computer, or client, for each employee who will use PeopleSoft applications. PeopleSoft 8 supports two types of access: the Windows client for developers and browser access for users.

Browser Access: PeopleSoft 8 applications take advantage of standard, compliant browsers that support HTML 4.0. The user starts their browser software, types in a URL and uses HTTP through a web server to send requests on to the application server. Lucas County will need to make sure that on each workstation a currently supported

browser is installed. Other than that, nothing else needs to be installed, such as applets or connectivity software, on the workstation running the browser.

Windows Client: Windows-based clients—which run on Windows NT 4.0, Windows 98, and Windows 2000—can connect to the PeopleSoft database directly using client connectivity software (a two-tier connection), or through a PeopleSoft application server (a three-tier connection). This option is only for developers utilizing PeopleSoft's Application Designer.

File Server:

Lucas County will need a file server to maintain a master copy of the system programs used by PeopleSoft software. The specific configuration requirements are based upon the requirements for all applications and network software.

Database Server:

The database server houses the database engine and the PeopleSoft database, which includes all of the object definitions, system tables, application tables, and data. The database server must be running one of the supported RDBMS/operating system combinations. In the case of Lucas County, this would be a valid Windows 2000/MS SQL Server combination. The server needs sufficient disk space to accommodate the operating system, one production and one test copy of the database, and all log files—this is in addition to any disk space required for training or development databases (where all of these databases are housed on the same server). A good rule of thumb is to initially oversize the storage media rather than undersize it.

Batch Server:

The batch server, or batch environment, is where the Process Scheduler installed and configured, and it is the location where many of the batch programs will run, such as Application Engine programs. In most situations this is also where the COBOL and SQR executables installed, yielding the most efficient operation.

In a multi server environment, there are options regarding the decision as to where the site's batch server environment resides. In the context of PeopleSoft, the batch server, or batch environment, refers to the Process Scheduler environment. Typically, this is the server on which the Application Engine and other batch programs run. In short, Lucas County has the option to install the batch server on a separate server, or it can run on either the application server or the database server.

Report Server:

In a Windows 2000 environment, Lucas County may (depending on reports volume) need a separate report server to handle PS/nVision, ReportBooks, Crystal Reports and/or Cube Manager. The report server requires Windows 2000 machines.

Application Server:

The application server is the core of the PeopleSoft Internet Architecture; it executes business logic and issues SQL requests to the database server. It is designed to permit communication between Browser access (via the web server) and the database. The application server consists of numerous PeopleSoft services and server processes that handle transaction requests. The application server is responsible for maintaining the SQL connection to the database for the browser requests as well as the Windows Development Environment. PeopleSoft uses BEA's TUXEDO products to manage database transactions, and Jolt, Tuxedo's counterpart, to facilitate transaction requests issued from the Internet.

Web Server:

A web server is required for the Internet Client. It serves as the link between the Internet Client, to which it sends HTML via HTTP, and the application server, with which it communicates via BEA's Jolt.

Architecture of Environments

PeopleSoft 8 features a two-tier, three-tier and N-tier architecture. Each of these configurations has its advantages and specific uses. For example, the two-tier configuration must be used when using DataMover to transfer data or for development on the PeopleSoft database. The three-tier configuration would be used in a typical client/server environment for development. When using the Internet Client, Lucas County users would actually be running in an N-tier configuration. The principal operating configurations, three-tier and N-tier are discussed in more detail below.

3 Tier (Client/Server)

The application processing logic that is executed on the client in a two-tier configuration runs on the application server in a three-tier configuration. In this case, RDBMS connectivity is no longer required on the client. The Windows client uses Tuxedo to send messages to the application server, which, in turn, sends the appropriate SQL to the database server. Since the RDBMS connectivity is not on the client, users no longer have the option to execute application batch processes on the client.

A Windows client obtains its client binaries from the file server—that is, <PS_HOME>\bin\client\winx86, where <PS_HOME> is the PeopleSoft high-level directory on the file server) in the form of .exe and .dll files.

4 or N Tier (Internet Architecture)

Unlike the Windows client, the browser user cannot establish a two-tier connection to the database, but *must* instead connect via a web server to the application server. The browser sends HTML via HTTP to the web server. The web server translates the HTML into Jolt and then forwards the request to the application server. The application server interprets these messages and sends SQL to the database server.

Infrastructure (Hardware & Software)

Three separate sets of Hardware are ordinarily used to support the following environments:

- Development, Demonstration and Testing Environments
- Production Environment
- Production Fail-over Environment

All storage requirements need to be considered on an instance-by-instance basis.

Lucas County has expressed interest in an alternative hardware strategy, which would allow consolidation of multiple servers (particularly, the Development, Demonstration, Testing and Production Environments) into a single physical unit utilizing the Unisys ES 7000 or similar hardware. Under this configuration, production fail-over is contemplated on the ES 7000, assuming the same is possible, or to alternate, geographically remote, hardware, upon total ES 7000 systems failure.

Internet Application Server

The Internet Application Server tier is the heart of PeopleSoft Internet Architecture. It leverages several technologies from BEA Systems (Tuxedo transaction monitor and JOLT), but the vast majority of components are delivered by PeopleTools development to support Internet access and integration.

- **Java Enabled Web Server**—Commercially available Web servers that support Java Servlet execution can be used to provide the execution environment for the PeopleSoft Presentation Relay Servlet, Integration Relay Servlet, and Portal Servlet.

- **Presentation Relay Servlet**—A PeopleTools Java Servlet that handles all inbound and outbound HTTP requests for PeopleSoft transactions and queries. This very thin Servlet acts as a relay between the client device and the core back-end services. It receives and serves HTML, XML, and WML requests over HTTP and maps the data in these requests to the Component Processor and Query Processor application services that execute under Tuxedo. It communicates with these back-end services via BEA Systems JOLT.

- **Integration Relay Servlet**—A PeopleTools Java Servlet that handles all inbound and outbound HTTP/XML requests for the third-party system integration. This is also a very thin Servlet that acts as a relay between the external or third-party system and the core back-end integration services. It receives and serves XML requests over HTTP and maps the data in these requests to the integration services—Application Messaging Processor, Business Interlinks Processor, and Component Processor—which executes under Tuxedo. This component communicates with these back-end services via BEA Systems JOLT.

- **Tuxedo**— This transaction monitor is used to manage these Internet Application Server services:

- **Component Processor**—A key piece of the Internet Application Server, this component executes PeopleSoft Components—the core PeopleSoft application business logic.
- **Business Interlink Processor**—Manages the execution of Business Interlink Plug-ins and their interactions with third-party systems.
- **Application Messaging Processor**—Manages the publishing, subscribing, and delivery of Application Messages in a PeopleSoft system.
- **User Interface Generator**—This component dynamically generates the user interface based on the Component or Query definition and generates the appropriate markup language (HTML, WML, or XML) and scripting language (JavaScript, WMLScript) based on the client accessing the application.
- **Security Manager**—Interfaces with the Directory Server using Lightweight Directory Access Protocol (LDAP) to authenticate end users and manage their system access privileges.
- **Query Processor**—Executes queries defined using the PeopleSoft Query tool.
- **Application Engine**—Executes PeopleSoft Application Engine processes.
- **Process Scheduler**—Executes reports and batch processes and registers the reports in the Portal's Content Registry.
- **SQL Access Manager—**Manages all interaction with the relational DBMS via SQL

Application Server

In the PeopleTools 8, the client has been removed from the end user's machine and replaced with a Web-based client called the PeopleSoft Internet Architecture or PIA. The concept of a client-server model has been effectively eliminated in this architecture.

The use of an application server provides the following benefits:
Systems can increase the number of clients they can support. Since the Application Server caches objects, it can service most of the future client requests and significantly reduce the load on the RDBMS in large environments.
The number of types of clients also increases. The Application Server facilitates many types of clients as well: the PeopleSoft Internet Architecture, Business Interlinks, Component Interfaces, and Visual Basic/Visual C-based user programs.
The Application Server allows databases to be located on different servers and coordinates the messaging between them. This feature, called Application Messaging, is one of the fundamental technologies of PeopleTools version 8. An example of its use is the integration of PeopleSoft HRMS and PeopleSoft Financials.

***Note*:** Lucas County can also have the web server on the same machine as the application server, in a logical configuration, or on a separate machine, in a physical configuration. In all cases, Acuent encourages Lucas County to provide the application server with the most RAM and processing speed available to take full advantage of the three-tier configuration. Lucas County may need to increase memory or processors as needed to attain desirable performance.

Database Server

One notable characteristic of a PeopleSoft database is the large number of tables, views, and indexes involved. In most databases these items number many thousands, and the number of tables contained in the version 8 databases are significantly greater than those contained in prior versions. Organizations typically maintain several of these large databases during an implementation. Because the application is stored in the database, separate application versions require separate databases and often a separate set of executables. The implementation strategy can have a significant impact on the amount of storage needed; therefore, defining these needs early is critical.

A successful implementation strategy will demonstrate a clear understanding of database administration issues such as:

- Appropriate database connectivity
- Memory configuration that maximizes performance within hardware limitations
- File layout that reduces I/O contention as much as is practical
- Optimizer modes and their impact on performance
- Query parallelism
- General database administration and maintenance

Points to Consider when Selecting/Sizing:

- Multiple disk drives improve performance and recoverability.
- Sufficient disk space to accommodate RDBMS software and all requisite products.
- Operating system (Patches and Fixes)
- Room for an additional instance on the Host including logs and dumps files.
- Database sizes vary depending on the application (modules) and transaction loads.
- If batch server or application server are co-located on the same Host, appropriate COBOL compiler, appropriate C compiler
- Tape backup device with ample capacity and speed to back up entire disk space daily.

- Video controller and display.
- Appropriate network interface card and cabling to connect to network.
- Uninterrupted power supply (UPS) with sufficient capacity to allow an orderly shutdown of the database server and operating system in the event of a power failure (optional, but recommended).

A good rule of thumb is to initially oversize rather than undersize storage media and to maximize the amount of RAM on the system.

Database Connectivity

An important consideration in the three-tier environment is the location of the database connectivity software. This section introduces some connectivity options for the Windows client and the application server.

While running in a three-tier environment on particular Windows client workstations, there is no need for any database connectivity software on that workstation. In PeopleSoft 8, ordinary end users need a browser and do not need SQL Server client. Developer workstations only need SQL Server client under certain conditions discussed below. The PeopleSoft application server is responsible for maintaining the SQL connections to the database in a three-tier connection.

Note: If Lucas County is planning to configure Windows clients to have the option to specify a two-tier or three-tier connection at logon, database connectivity software must be installed on the client. *All* two-tier PeopleSoft client workstations need database connectivity software.

Client database connectivity software is necessary for the three-tier environment in the following situations:

- Installing a database or loading stored statements using Data Mover.
- Doing an Application Upgrade.
- Logging on in two-tier mode.
- Running Process Scheduler (COBOL and SQR) locally.

All Windows NT and UNIX application servers require database connectivity software to maintain the SQL connection with the RDBMS. Install the required connectivity software and associated utilities for the RDBMS. From the application server machine, Lucas County should be able to connect to the database server using an SQL tool.

Web Server

The web server performs little logic. It relays data back and forth between the browser and application server and maintains session variable and state information. The web

server handles encryption, and manages the connections between the browsers. It also caches and serves up images.

The application server based on information stored in the database generates the HTML pages dynamically. This architecture yields high performance because it only sends HTML to the client.

Batch Server

The term batch server is equivalent to the term Process Scheduler server. PeopleSoft batch processes, such as COBOL and SQR, are scheduled and invoked by a Process Scheduler server.

In almost all configurations, batch server SQR and COBOL files are located and executed on the same computer as the Database Server. PeopleSoft also supports setting up the batch environment on an application server, or even on a dedicated server. However, batch performance is almost invariably best when the processes are executed on the database server.

Reporting Server

In addition to setting up a batch, database, or application server, a separate report server can be set up to address reporting needs. A report server is a Windows NT server that's set up to accept processing requests through the Process Scheduler.

The following descriptions should give a better understanding of processes that would be run on a report server.

PS/nVision: PS/nVision is financial reporting tool that is integrated with Microsoft Excel to provide output in Excel spreadsheets. Because spreadsheets are the preferred method of working with financial information, this is an extremely powerful tool for our customers. Report Books are groups of reports to be executed together in a batch.

Crystal Reports: Crystal Reports is a Windows-based reporting tool that provides impressive formatting and graphics. Most of PeopleSoft's standard reports are written in Crystal Reports.

File Server

A file server is needed to share printers and also to maintain a master copy of the system programs used by the PeopleSoft software. Lucas County specific configuration requirements will, of course, be based upon the requirements for all applications and network software used on that server.

A standard PeopleSoft environment contains a file server to share printers and to maintain binaries required for the PeopleSoft Windows client. The browser access requires no PeopleSoft installation. However, while running the PeopleSoft Windows client, the file server is used to maintain a master copy of the system programs to which each workstation connects. Lucas County will need to use a 32-bit file server that supports a Windows client.

Points to Consider for File Server

Sufficient disk space to accommodate the following:

- PeopleSoft software—500 MB to 1 GB/Copy of executables, depending on application(s).
- Network operating system and associated files including print spooling files.
- Other application files. (Example: MS Office approximately 90 Mb)
- Sufficient memory to meet network operating system requirements. It is recommended that Lucas County maximize the amount of memory on the file server to ensure optimum performance.
- VGA video controller and display (800x600 or higher resolution supported).
- Network board.
- Tape backup system with ample capacity and speed to back up entire disk daily.
- Hewlett-Packard LaserJet, or compatible, laser printer that supports TrueType fonts and has *at least* 1.5 MB of memory.

Workstation

PeopleSoft delivers a number of products that a user can use to access PeopleSoft applications. Most significantly these include:

- The *PeopleSoft Internet Architecture* or *PIA.* PIA refers to the HTML, Internet browser-based application access. Currently, PeopleSoft supports Microsoft Internet Explorer and Netscape Navigator.
-
- The *32-bit Windows* client is designed for a typical developer of PeopleSoft applications. It is certified to run on Windows NT 4.0, Windows 2000 and Windows 98. Windows XP is not supported as of the time of this report. The Windows client will be supported only as a development tool in PeopleSoft 8.

Browser Access

This section describes the requirements for running PeopleSoft applications over the Internet. This situation calls for an application server and a web server. The web server acts as an intermediary between the client and the application server. On the client side, all that is needed is a workstation supplied with a supported browser.

Browser access leverages the PeopleTools application server to dynamically generate Internet applications that are built in the Application Designer. Browser access provides dynamic hyperlinks, image support, and user customizable HTML tags, enabling Lucas

County to build applications that look and feel like a modern web site. Browser access customizations are all done through PeopleTools and therefore are upgradeable.

No client installation is required; no PeopleSoft software resides on the client workstation. The browser is all that is needed.

Basic client requirements are as follows:

- Browser HTML 4.0, JavaScript 1.1, and CSS-1 compliant
- Browsers that meet these criteria are Internet Explorer 4 (and greater) and Netscape Navigator 4 (and greater). Both browsers are supported on a variety of operating systems (Windows 98, NT, 2000 and Macintosh).

Developers Client

Hardware Requirements

The following list presents the minimum hardware requirements that workstations must meet to run PeopleSoft applications as a Windows client. Obviously, the faster the machine, the faster the PeopleSoft application response time. To achieve optimal performance, we recommend that Lucas County invest in hardware that maximizes the performance of the operating system environment.

- Intel Pc with at least a 150 MHz Pentium with 80 MB of RAM or higher.
- VGA controller and display of 800x600 resolution or higher. 256 color recommended.
- Network interface card.
- At least one workstation with a standard CD-ROM reader to install PeopleSoft software.
- Mouse or other pointing device.
- Modem required on at least one workstation for remote PeopleSoft maintenance and access to Customer Connection. The higher the modem speed the better.

Software Requirements

The following list presents the minimum software requirements that the workstations must meet to run PeopleSoft applications as a Windows client. Note that there may be additional software requirements, depending upon which platform is running and which applications are installed.

- Windows NT 4.0/2000.
- Supported database connectivity software for the RDBMS environment; estimated disk space 22 to 65 MB.

- All developers using two-tier PeopleSoft client workstations need database connectivity software. In addition, if developers are planning to configure Windows clients to have the option to specify a two-tier or three-tier connection at logon, they will need database connectivity software on the client. However, if they are running only in a three-tier environment on a particular Windows client workstation, there is no need for database connectivity software on that workstation, because the application server is responsible for maintaining the SQL connections to the database.

Current System Configuration

As of the time of this report, no production hardware, other than the data arrays, has been purchased for the system infrastructure. Development hardware has been acquired with the following specifications:

- Application/Web Server
  2 X 700 MHz Xeon CPUs
  2 GB RAM
  100 GB RAID5 Storage

- Database/Batch/Reports Server
  2 X 700 MHz Xeon CPUs
  2 GB RAM
  100 GB RAID5 Storage

- File/Web Server
  2 X 1.4 GHz Pentium III CPUs
  2 GB RAM
  40 GB RAID1 Storage

- Primary Storage for all environments (Production, Development, Test)
  1 TB disk array
  Additional, geographically remote, 1 TB disk array maintaining mirrored copy of principal array

- Operating System/RDBMS
  Microsoft 2000 Server
  Microsoft SQL Server 2000

End user systems vary widely in specifications. There is currently no Lucas County standard for operating systems. Users may have operating systems including Microsoft Windows 3.1, 9x, ME, NT, XP or 2000. Likewise, there is no mandated minimum required hardware configuration for workstations. Memory and CPU configurations may be insufficient to achieve sufficient performance.

Future Configurations

Operating System and Database Management System

Lucas County has unequivocally chosen Microsoft SQL Server as the database management system for its PeopleSoft implementation. SQL Server 2000 is a PeopleSoft supported database management system, and is suited for both the Financials and HRMS user population discussed below. Generally, for **concurrent** user populations under 400 persons, which Lucas County is significantly under, there is no substantial gain in employing any alternative database management system. Additionally, purchasing, implementing and maintaining an alternative system, such as Oracle, is considerably more costly and requires personnel that Lucas County does not currently employ. SQL Server appears an appropriate choice to meet Lucas County's database needs.

The choice of SQL Server limits the operating system and hardware choices to be employed to traditional or enhanced Microsoft Server/OS technologies. This raises the question of whether potential hardware/OS choices will be supported.

Microsoft NT4 Server and Microsoft 2000 Server operating systems are supported by PeopleSoft for PeopleSoft 8.x server implementation. Further, these operating systems are supported by PeopleSoft in combination with MS SQL Server 2000 (Enterprise or Standard Edition).

Lucas County is investigating implementing all instances and modules (Production/Test/Development of HR/Financials) of PeopleSoft 8 in a data center hardware environment such as the Unisys ES 7000. The operating system utilized to manage such data center hardware is Windows 2000 DataCenter Server. Review of the PeopleSoft support operating system platforms does not reveal DataCenter Server to be a supported platform, however, this issue has been directly addresses by PeopleSoft as follows:

> "Windows 2000 is packaged as Server, Advanced Server and DataCenter Server. The primary difference in the NT 4.0 Enterprise Edition, Windows 2000 Advanced Server and DataCenter Server is their capability of handling more processors and memory. In the past we have certified both types and noted the information in the Platform database. Going forward we only plan to certify the NT 4.0 Server Standard Edition and Windows 2000 Server, however, we will continue to support the NT 4.0 Enterprise Edition, Windows 2000 Advanced Server and DataCenter Server. Our past testing has found no differences in behavior between the Standard and Enterprise Editions to necessitate continued testing of both types. Once the NT 4.0 Server Standard Edition is certified it will be implied that the Enterprise Edition is also supported. Once the Windows 2000 Server edition is certified it will be implied that the Windows 2000 Advanced Server and DataCenter Server are also supported."

Windows 2000 and SQL Server 2000 versions: FAQs on what we support and certify, Resolution 705418, PeopleSoft Customer Connection, August 22, 2001.
Lucas County can safely rely upon Windows 2000 and DataCenter Server to be supported operating platforms in combination with SQL Server 2000.

Database, application, batch and web servers (Production)

As a rule of thumb, the following statements can be used to determine whether sufficient CPU resources exist to implement PeopleSoft version 8, whether it be for the Financials or the HRMS applications:

Application Server – This server is the workhorse of the PIA environment. This is because all logic is processed on the application server, the user interface is generated on the application server, and the capabilities of the PeopleTools application server perform functions such as Unicode, XML messaging, and other advanced features. Processing bandwidth for this server is based upon user population and user functions, and must be calculated to provide the response level desired.

Database Server – CPU bandwidth for the database server is determined as a fraction of the bandwidth required for the application server. General recommendations put the required CPU at 1/2 of the CPU bandwidth required for the application server.

Web Server – CPU bandwidth for the web server is determined as a fraction of the bandwidth required for the application server. General recommendations put the required CPU at 1/4th of the CPU bandwidth required for the application server.

Batch Server – CPU bandwidth for the batch server is determined as a fraction of the bandwidth required for the application server. General recommendations put the required CPU at 1/3rd of the CPU bandwidth required for the application server.

As stated above, these servers may be housed in separate physical servers, or, alternatively, be housed as separate logical servers within one or more physical servers. The most common scenario of server configuration, in a Windows based environment, is to house application and web services on a single server and to house batch and database services on a second server.

In addition to determining CPU bandwidth requirements, memory (RAM) requirements 'must be determined. The required RAM is determined by reference to the number of concurrent users for the Application and Web Servers. The database server will require 4 to 8 GB of RAM. We will address the memory requirements in detail first. To determine this, we have to examine the concept of concurrent users anticipated on the system.

A concurrent user is defined as a person connected to the system, actively performing a business process. These are not simply people who have logged on and are inactive. These are concurrent active users who are performing the business process at an average speed for that type of business process. End users can be divided across three categories: heavy, medium, and light users. This refers to the complexity of transaction the users are doing. More complex transactions have more complex business rules and more user interactions, which require more CPU usage on the application server. Voucher entry, order entry, and purchase order entry are heavy transactions. GL entry, job data entry, pay sheet entry are examples of medium transactions. Self-service transactions like updating address, submitting expense reports, and portal browsing are light transactions.

Because there is no current usage of PeopleSoft at Lucas County, reasonable estimates have to be made regarding the user population. Additionally, Lucas County will specifically require that the system suffer little or no noticeable effect on performance, regardless of the number of concurrent users (assumes 100% concurrency). Based upon discussions with Lucas County personnel, it was determined to establish the user population based upon a number of users that Lucas County was unlikely to exceed. For HRMS, it was determined that there were to be 10 heavy, 50 medium and 50 light

users, or an assumed total of 110 users. For Financials, it was determined that there were to be 10 heavy and 50 medium users, or an assumed total of 60 users. The application server and the web server each require a minimum of 512MB for up to 25 concurrent users. Thereafter, 20 MB are added for each additional concurrent user for the application server and 5 MB for each additional concurrent user for the web server. System requirements would be calculated as follows:

HRMS

512MB + (110 – 25) * 20MB/user = 2212 MB for the Application Server
512MB + (110 – 25) * 5MB/user = 937 MB for the Web Server

A total 3149 MB of RAM is required to support the application and web server for the contemplated number of concurrent HR users. Additionally, 4 to 8 GB will be required to support the database server.

Financials

512MB + (60 – 25) * 20MB/user = 1212MB for the Application Server
512MB + (60 – 25) * 5MB/user = 689MB for the Web Server

A total 1901 MB of RAM is required to support the application and web server for the contemplated number of concurrent HR users. Additionally, 4 to 8 GB will be required to support the database server. It should be noted that available memory has a significant impact upon system performance. Configuration of both the HRMS and Financials servers at 8 GB should provide excellent performance predicated upon available memory factors.

When an organization has no prior PeopleSoft “track record”, calculation of appropriate CPU requirements is determined by reference to the quantity and quality (heavy, medium and light) of users. The base line CPU used to make this determination is a 500 MHz Intel processor. Such systems will support as an application server, concurrently, 15 heavy users or 40 medium users or 100 light users per processor. The processing needs of the database, batch and web server are thereafter estimated based upon a preset ratios (database 1/2, web 1/4 and batch 1/3 of application server CPU).

Requirements are determined as follows:

HRMS

(10 Heavy Users) * (500 MHz / 15 Heavy Users)	=	333 MHz
(50 Medium Users) * (500 MHz / 40 Medium Users)	=	625 MHz
(50 Light Users) * (500 MHz / 100 Medium Users)	=	250 MHz
Total for Application Server		**1208 MHz**
Web Server (1/4)		**252 MHz**
Database Server (1/2)		**603 MHz**
Batch (1/3)		**402 MHz**
TOTAL (if housed in one physical unit)		**2465 MHz**

Financials

(10 Heavy Users) * (500 MHz / 15 Heavy Users) =	333 MHz
(50 Medium Users) * (500 MHz / 40 Medium Users) =	625 MHz
Total for Application Server	**958 MHz**
Web Server (1/4)	**240 MHz**
Database Server (1/2)	**479 MHz**
Batch (1/3)	**320 MHz**
TOTAL	**1997 MHz**

Having determined the optimal server CPU and memory requirements, and providing for 100% concurrency in the calculations, we turn to the potential hardware configurations that will support the production environments. This issue is undertaken with the following Lucas County requirements:

- Any system infrastructure implemented must minimize or eliminate the possibility of a "single point of failure".

- System redundancy and fail-over capability must be provided, allowing system functionality on a 24 hour, 7-day per week basis.

- Eighteen COBOL Legacy applications exist on the Lucas County mainframe. Six of the applications will be replaced by the PeopleSoft applications. The remaining applications must be migrated, re-engineered or replaced by other systems
- Lucas County's important technological resources, namely server support personnel, must be leveraged to the greatest extent. Minimizing the number of servers to support, and the locations at which they must be supported is a County goal

- Much of Lucas County's server hardware (for Windows based applications) is decentralized. Decentralized server hardware creates substantial risk regarding continued server operations. Normal maintenance, hard disk backups, fail-over capacity and maintenance of an adequate environment is difficult to accomplish, if not impossible, in a decentralized server environment.

- Assuming cooperation by other governmental agencies, the Data Processing department wishes to establish centralized server administration for all County applications. Centralization will maximize utilization of existing personnel. Centralization, using individual servers to support each application may require as many as 80 servers, including the PeopleSoft servers. Upgrades of the operating systems, application of service packs and performance of other hardware maintenance are multiplied by the quantity of servers.

Acuent is neutral regarding the particular hardware or manufacturer chosen to support PeopleSoft applications, provided that the hardware is of sufficient capacity and the operating system is PeopleSoft supported. However, in the case of Lucas County, the question is whether to employ the data center technology of the ES 7000 instead of utilizing traditional servers.

In brief, a data center is a multi-CPU unit (normally 8 or greater), which can operate as a single server unit, or, alternatively, operated to simulate the operations of multiple physical servers. In the past, in Windows based systems, performance drastically dropped once 4 CPUs were exceeded in a single physical server. With improvements in both hardware and operating systems (Windows 2000 DataCenter and Advanced Server), data centers have been developed with between 16 and 32 CPUs, while, at the same time, minimizing bandwidth loss due to multiple CPUs being controlled by the operating system. The Unisys ES 7000 is one such unit.

The new release of the ES 7000 allows a customer to equip a system with up to 32 CPUs (multiple CPU speeds are available) with an average CPU speed of 1.4 GHz. Benchmarking tests have shown that each such processor can handle up to 1000 concurrent users for database requests (equivalent to 166 PeopleSoft concurrent Application Server users). Decline in bandwidth with the addition of processors is virtually negligible up to 16 processors and acceptable with up to 32 processors.

One of the more salient features of this hardware is provision for systems failure. With ongoing improvements in the operating system, it is anticipated that the system will provide dynamic reallocation of memory and processor resources when these resources are strained or fail. Automatic fail-over for a production system can be provided for in the current setup.

In total, the ES 7000 provides a powerful solution for enterprise needs. The Unisys platform is costly. Although actual costs are not directly available from Unisys publications, the base cost for such equipment, minimally equipped, is $100,000 and a 16 CPU – 40 GB unit has an estimated cost of $399,000. The estimated cost for a single CPU with 2 GB of memory is approximately $20,000.

An immediate concern regarding the ES 7000 is that, standing alone, it fails to eliminate a primary Lucas County need. The ES 7000 itself creates a “single point of failure” for a mission critical application. Although fail-over can be provided within the physical unit, the failure of the entire physical unit eliminates this capacity. Even with the acquisition of the data center, it is recommended that fail-over capacity be provided external to the unit for mission critical applications.

As stated above, the dynamic reallocation features that make the data center hardware and software attractive are not currently fully operational. Acuent has no doubt such features will ultimately be implemented (estimated to occur within the year), but this risk must be stated. In the absence of these features, some of the maintenance savings envisioned by using this technology are lost. By way of example, personnel will need to be trained and retrained regarding equipment/OS setup and usage. The system will need to be manually maintained pending full implementation of the dynamic features. Without doubt, Data Processing will be facing an operating system modification by upgrade or service pack in the near future.

The ES 7000 also provides resources far in excess of Lucas County’s needs to support PeopleSoft environments alone. Even if the Production, Test, Demonstration and Development systems were to be hosted subparts of the same physical unit, and fail-over environments were provided within the unit, this could be accomplished with the

use of 8 to 10 CPUs and 40GB of RAM. The estimated cost of this approach would be in the $300,000 range, with no provision for total physical unit failure.

Having stated the negatives, it is important to note Lucas County prerogatives that are satisfied by the ES 7000:

- Automated internal system redundancy and fail-over capacity will be provided on a full-time basis in the projected near future.

- If desired, intensive COBOL legacy applications could be migrated and recompiled in the data center environment and provide superior performance.

- Data Processing personnel would be engaged in the update and maintenance of significantly fewer hardware platforms.
- Expansion capabilities of this hardware (up to 32 CPUs) would allow for the consolidation of numerous decentralized server platforms, effectively leveraging available personnel.

- Multiple hosted PeopleSoft environments (and perhaps other applications) will establish and demonstrate the efficacy of the data center concept to other departments to support centralization.

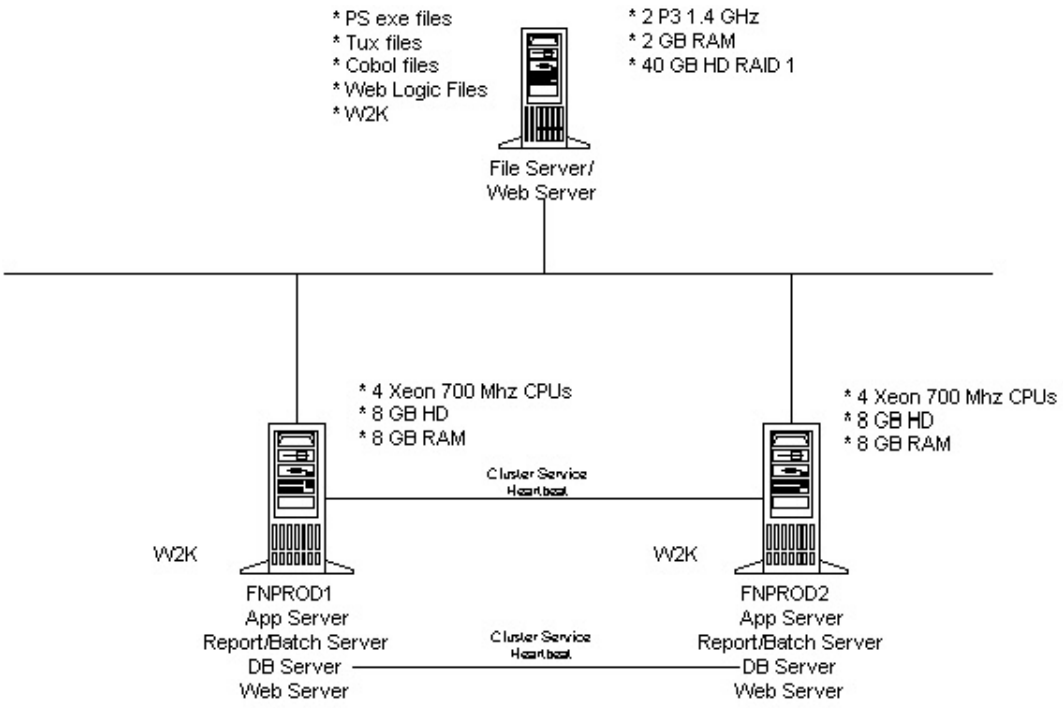
- Data center hardware will provide fail-over capacity for other County mission critical applications. The decision to employ data center technology, in the case of Lucas County, is governed by economic and political concerns. As a long-term goal for centralization, leverage of resources and simplification of administration, the approach cannot be refuted.

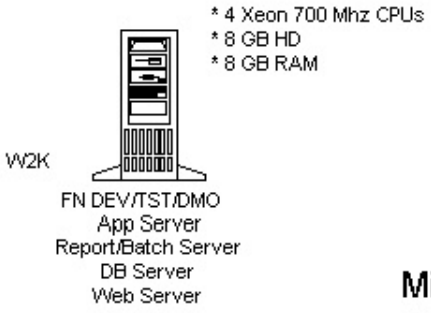
Recommendation: Based upon a weighing of the stated considerations, Acuent would recommend that Lucas County purchase the ES 7000, configured with 10 X 1.7 GHz CPUs and 40 GB of RAM, using the Microsoft 2000 DataCenter Server and Microsoft SQL Server 2000 Enterprise as the supported database/OS platform. This configuration will support all of the desired PeopleSoft environments for HRMS and Financials. Additionally, Acuent would recommend the purchase of two backup servers for the Production environments, configured with Windows 2000 DataCenter Server, MS SQL Server 2000 Enterprise, 4 X 500+ MHz CPUs and 8 GB of RAM. All servers, or subparts of the data center, would be configured in a four-tier logical server configuration.

Because of considerable cost involved in procuring the Unisys ES 7000 system, consideration must be given to a multiple server approach. This approach only effects two of County goals stated above, namely simplified administration/leverage resources and multiple application centralized hosting. This is not to minimize the impact, but instead, to balance the cost.

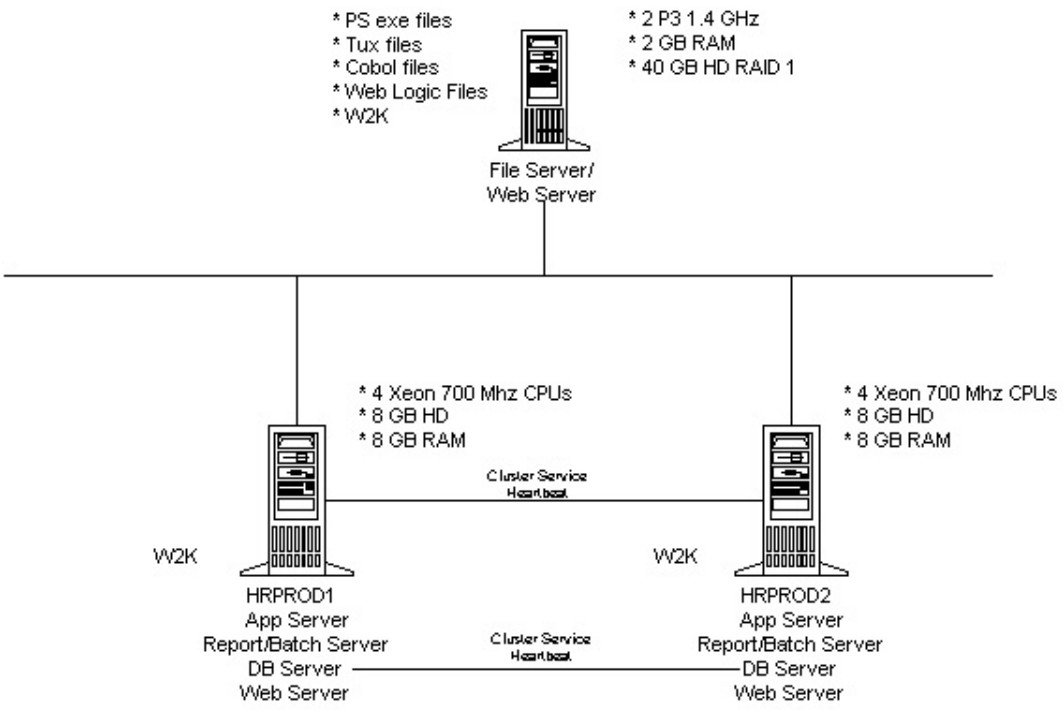
The following graphical representations illustrate the layout of a suggested multiple server environment for HRMS and Financials. The Production hardware is duplicated to provide parallel operational service for all logical servers with the exception of the database server. In other words, at all times, except upon a failure, there exist two application servers, two report/batch servers, two web servers, and one operational

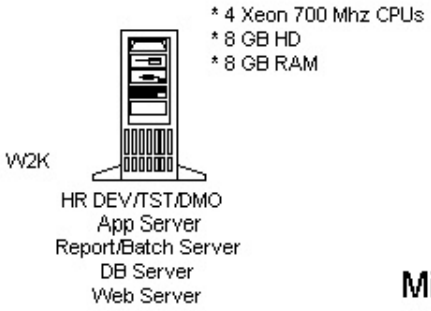
database server. No loss of service occurs in the event the failure of one of the physical or logical servers because the other server is concurrently operational. Upon failure of the database server, the parallel server is activated to replace the failed server. Each Production server is equipped with 4 X 700 MHz CPUs and 8 GB of memory, so that each server standing alone will support full performance continued operation. A single file server will support all HRMS and/or Financials environments, as shown below.





Minimum Hardware Required for Initial PeopleSoft FN 8.4 Installation





Minimum Hardware Required for Initial PeopleSoft HRMS 8.3 Installation

Utilizing this approach, the entire systems server compliment can be reduced to a total of seven units, with the file server providing service for both HRMS and Financials. Full redundancy and increased processing power is provided in each of the Production environments. This system could operate on the less-costly Windows 2000 Advanced Server operating system. Additionally, the following Lucas County prerogatives are satisfied:

- "Single point of failure" concerns are eliminated for Production systems.
- System redundancy and fail-over capacity providing full-time system functionality exists.
- County server support is greater but not to an unmanageable level.

It is important to note that the approximate cost of such a system would be less than half that of the ES 7000 cost to provide similar services (including fail-over servers).

That being said, the overall long-term benefit, including incorporation and centralization of County information services and maximizing resource utilization cannot be accomplished with this approach. For this reason, Acuent maintains its recommendation to utilize data center technology to centralize Lucas County server support.

The remaining issue concerns the adequacy of existing storage capacity to support the implementation of PeopleSoft applications. Lucas County has committed their 1 TB array system with an additional array, updated real-time, to support the PeopleSoft system. It should be noted that the arrays are not dedicated solely for PeopleSoft, but County personnel have indicated, storage as would be necessary will be committed to PeopleSoft.

It is important to note that most historical data is not to be transferred upon implementation, minimizing database storage requirements.

Experience with similarly sized organizations indicates that Lucas County has more than sufficient storage capacity to support the current system and likely future upgrades. Comparable organizations typically utilize less than 20 GB of actual storage per Production environment, including many years of historical data. Current data within the Lucas County system (historical data is removed annually) amounts to 3 to 4 GB for all data likely to be contained in the HRMS and Financials systems upon implementation. Even assuming 20 GB per environment (a gross over-estimation), Lucas County will use less than 200 GB of database storage.

Recommendation: Lucas County should continue to use the existing 2 X 1 TB storage arrays, allocating approximately 200 GB for PeopleSoft database usage.

Database, application and web servers (Development/Testing/Demonstration)

The recommendation for configuration of the Unisys ES 7000 takes into account implementation of Development and Testing environments on the data center server. It is possible that Lucas County will determine not to employ the data center approach, or, alternatively, not host these environments on the data center. These environments do

not encounter usage anywhere approaching that of the Production server and can be scaled down considerably.

All of these environments can be hosted as a group on a single server configuration.

Recommendation: Acuent recommends that Lucas County maintain its existing Development/Testing/Demonstration hardware for HRMS and duplicate the same (with the exception of the file server which can support all environments) for the future Financials Development/Testing/Demonstration hardware. Acuent would recommend that the physical server, containing database and web services, have RAM increased to 8 GB.

Employee Self-Service

PeopleSoft 8 HRMS allows organizations to deploy certain self-service applications and make these services available to all employees. Address changes, benefits enrollment and compensation data lookup can be accomplished online. Analysis of the benefits of such services are not considered here, however, if utilized, these applications can reduce HR workload, improve and make more accessible HR services and free HR personnel for the performance of other tasks. The calculations for server sizing have taken account reasonable concurrent self-service usage on the HRMS server and the systems proposed will sufficiently support such applications.

Workstations

End Users

Currently, Lucas County users utilize a variety of web browsers in a variety of equipment and operating system environments. PeopleSoft will operate well in all of those environments assuming that the minimum hardware and software requirements (see above) are met. Significant efforts should be made to determine the hardware and software specifications of all units that will utilize version 8.0.

That being said, the only PeopleSoft supported configurations (those that PeopleSoft will provide helpdesk support in the event of problems) for PeopleSoft 8 applications are as follows:

- Internet Explorer 5 and 5.5 on NT4, Windows 98, and Windows 2000
- Netscape Communicator 4.7 on NT4, Windows 98, and Windows 2000

Additionally, Internet Explorer 5 is the recommended browser, as it is the most consistent and reliable performer in delivering PeopleSoft applications with the designed look and functionality.

It was anticipated that Navigator version 6 would be equally reliable, but this has not proven to be the case. Known bugs include:

Access keys do not operate as expected, in that they execute the requested function without requirement that the user press the enter key
Default cursor positioning is inconsistent and not where expected when a page opens
Radio buttons that have FieldChange PeopleCode associated with them do not remain selected after users select them

It should be noted that many of the strictly HTML problems of prior Navigator versions have been resolved in version 6. It is worthwhile to discuss some of the limitations of version 4.x Netscape, as it is utilized widely in Lucas County:

Fields in error do not highlight to red for ease of issue identification
Custom sized edit boxes and long edit boxes are not supported
Custom sized push buttons and drop down list boxes are not supported. List boxes size to the longest list item
Check boxes, radio buttons and edit boxes can be disabled but cannot be visually grayed, making it appear that these items are active
Borders are not always visible where there are nesting multiple tables on a single page
Calendar prompt is not available
Tabbing order may not operate correctly
Hot keys and access keys cannot be used
Users may receive error messages if they attempt to access PeopleBooks using the help button

It understood that none of these issues are devastating to the operation of the application, but the dramatic shift in the type of environment, combined with the diminished functionality described, requires serious consideration of browser choice.

Recommendation - For all of the foregoing reasons, it is recommended that all end-user PeopleSoft applications should be required to launch on Internet Explorer 5.0 or 5.5.

Additional configuration issues that should be considered include:

For the PeopleSoft 8 Internet client, memory requirements are about 10MB for the browser and 32Mb overall for the workstation. However, because users might use multiple concurrent windows in the course of their duties, it is recommended that heavy users have at least 128 MB memory.

The web browser only renders the HTML and runs simple JavaScript, so a low-end processor will work fine for many users. This does not mean that the client does still impact performance. The slower the client, the more likely that a flash will be seen when the browser redisplays a page (which is what happens every time there is a trip made to the server) and this will negatively impact the look and feel of the internet applications. With a faster client, the redisplay results in a very quick flicker rather than a flash. This can also be impacted based on what HTML the browser is rendering. This is not different from any page that is accessed over the Internet. For a user interaction, which results in a trip to the server (so that we generate new HTML), a Pentium 133Mhz will have a more noticeable delay when redisplaying the page. Page redisplay could vary from two seconds, for a 133Mhz machine, to less than ½ second, on a 750Mhz and above machine.

It is recommended that all heavy users of the PeopleSoft applications be provided with computers with 500 MHz and above processors with at least 128Mb of RAM. Lower demand users could maintain existing systems, or alternatively, be supplied lower performance systems.

Windows Client

Configuration, and if possible, standardization are the principal issues for the Windows Client developers' units. As stated above, this is the only client configuration that performs processing locally, as opposed to the browser client that merely displays HTML and transmits processing requests. These are the only units capable of making two tier connections to the database. SQR and COBOL processes can be executed locally. Crystal development is only possible in the Windows client. For these reasons, it is critical to properly construct and configure these units for optimal performance.

Operating systems requirements are less liberal with the Windows client. The use of the Windows 98 OS will disable certain aspects of the environment, most notably, query and tree design, and the PeopleCode debugger. The only fully supported OS environments are Windows NT and 2000. Lucas County must assure that all development units are adequately outfitted with these operating systems.
Memory and processor requirements are also a crucial consideration. Notwithstanding PeopleSoft minimum requirements stated above, adequate performance will not be achieved absent significantly greater memory and processing bandwidth.

Recommendation - At minimum, the developers unit must have at least the same processing and memory as recommended for the heavy functional user, that being, 128 MB RAM and greater than 500 MHz processing speed. Greater RAM should be added if possible and processing speed should be maximized. The developers' unit is performing the simultaneous functions of development and end-user and should be equipped accordingly. Diminished speed of development will only hamper organizational imperatives.

As a final issue, the Windows client should have adequate storage for the various programs which must be installed, such as the client software, COBOL, SQR, Crystal, Excel, Outlook, etc. In today's age of multi-gigabyte drives, this has hardly been seen as an issue, however, out of an abundance of caution, it is recommended that the Windows Client be equipped with a 4 GB or greater disk drive.

Security

PeopleSoft 8 offers user validation through Lightweight Directory Access Protocol (LDAP) as an implementation option. Security need not be processed through LDAP, but instead, may be processed through an updated version of their traditional security. Additionally, for users of both the Financials and HRMS systems, can have a single login, which grants access to both systems, without resort to LDAP. Many organizations have discarded LDAP as an option based upon the effort required to implement, lack of need and/or the sufficiency of existing PeopleSoft security.

LDAP is primarily a consideration if a substantial number of applications within an organization's computing environments can utilize LDAP. Usage for a single application is wholly unwarranted, unless Lucas County wants to take advantage of the additional features provided by LDAP or when Lucas County desires to implement self-service applications. LDAP can act as a singular repository for multiple application credentials and allow for centralized administration of user id/password security. The user, subject to organizational policy, is permitted with a single sign-on, access to all permitted applications. Additionally, in conjunction with PeopleSoft HRMS, LDAP can be configured to automatically remove terminated employees from access to applications that use LDAP.

Another feature warranting LDAP implementation is the ability to rapidly implement position-based security over a large user-population and create reliable, repeatable profiles. It is envisioned that a large portion of the potential user population will need limited system access for self-service applications, but the number of such users is quantified in the thousands. Through use of directories, profiling and interface to PeopleSoft HRMS, all current employees could be provided automated job specific credentials, significantly reducing the massive security needs of self-service.

Below is a list of considerations and features associated with LDAP security:

- Directory Services tend to be used for applications that require fast searches and that read from the database more than they write to it. The most prevalent use today is for security at both the system level and for applications.

In 8.1 customers will be able to "synchronize" data between PeopleSoft databases and their directory service in any way they see fit so not to have to duplicate users in the directory services.

PeopleSoft 8 LDAP supports SSL**.** Secure Sockets Layer (SSL) is part of the LDAP standard and can be used to secure the connection between PeopleSoft and the LDAP Directory. This is essentially analogous to how the browser to web server connection can be secured using HTTPS. For PeopleTools 8.16, LDAP/SSL is supported for iPlanet Directory Server (AKA Netscape). As implementation differences in the other

supported directories are resolved LDAP/SSL will be supported on those directories as well (e.g., Microsoft Active Directory, Novell NDS eDirectory).

NDS and Active Directory are very different from each other. AD is a NOS-based directory designed for use with Win2K and uses a "domain" approach to the directory structure. Novell is touting NDS as a "Full Service" and "Platform Independent" directory. In truth, it is available for only 3 platforms today, NetWare, NT/W2K, and Solaris.

Feature	Novell eDirectory V8	Microsoft Active Directory	iPlanet Directory Server
Automatic Account Lockout after x failed attempts	Yes	Yes	?
Manual Account Lockout by Administrator	Yes	Yes	?
Required/restricted password characters (e.g. must have non-alpha, non-numeric)	No	?	?
Can't reuse previous x number of passwords	Require Unique Passwords x not configurable	Yes	?
List of unacceptable passwords	No	No	?
Minimum password length	Yes	Yes	?
Password expiration after x days	Yes	Yes	?
Force password change	Yes	Yes	?
Restrict Login by IP address	Restrict by IPX, IP, SDLC, Ethernet, TokenRing, OSI, AppleTalk, UDP, TCP at any point in the tree.	No. Restrict by NetBIOS name only. Restrict only at the Account level	?
Restrict Login by Time	Yes	Yes	?

Network Environment

The PeopleSoft Application is a distributed application and, therefore, consideration of its impact on a network is important. Generally speaking the application is “network friendly” – the demands it places on a network are not significant, though the condition of a network can have a dramatic impact on the performance of the application. PeopleSoft 8 will alleviate some of this sensitivity since the transport of HTML and XML is much less sensitive to network performance.

During a Technology Assessment we are looking at these major issues:

- ***Network configuration****:* Various configurations provide differing levels of service. Generally speaking the PeopleSoft application run completely independent of the network configuration.

- ***Bandwidth****:* The PeopleSoft application requires 10-30kB/sec for a typical 3-tier connection for an active session - the PIA will obviously require somewhat less depending on the application.

- ***Latency***: The delay between the client executable and the application server proves to be the most significant issue when dealing with performance in the PeopleSoft application. Typically greater than 75ms of delay will be noticeable to all but the most casual user. In the PeopleSoft 8 PIA, this issue will be significantly mitigated since delay is not as much an issue in the transmission of HTML and XML.

Points to Consider:

- The only traffic between the client and server is the HTTP traffic for the HTML/JavaScript.

- No more high number of network round trips for field processing such as FieldChange PeopleCode.

- 10 to 40KB of data travel between the web client and web server for each user interaction. This will vary depending on complexity of the page being rendered. Data compression is available which can lower bytes over the network to about 5KB even for a 40KB message. Internet Explorer 4 and 5 support compression and later versions of Netscape Navigator support compression. The following is a summary of how web browser compression works with the PeopleSoft Internet Architecture:
    - On the Web Server, there's a PeopleSoft parameter in the configuration properties file to enable it. The default is no compression.
    - If the Web Server has compression enabled, and the browser supports compression, then the network packets are compressed.
    - If the Web Server has compression enabled, and the browser does not support compression, then the network packets are not compressed.
    - If the Web Server does not have compression enabled, then no compression is done.
    - If the browser supports compression, it will send something in its network packet identifying that it supports compression.

The following are averages for PIA performance.

- Compression is used between the web browser and web server resulting in an average page size of 5kb. This results in an average message size of 50kb when parity bits are included.

- We don't believe that application complexity will impact this average message size. HTML compresses very efficiently so all message sizes should be close to 5 KB.

- Currently the internal LAN in Lucas County is very stout, with plenty of bandwidth to the users' desktops. No change is envisioned for the current configuration.

Conclusion

Lucas County has viable choices in the configuration of their future Financials and HRMS systems. None of those choices are without ultimate significant financial costs. The primary question lies in whether Lucas County desires to implement server centralization for PeopleSoft and non-PeopleSoft applications using data center technology.

Acuent recommends that the Lucas County purchase hardware at the time of its implementation of PeopleSoft 8 as follows:

HRMS and Financials Application/Database/Web/Batch/Reporting server for all environments: Unisys ES 7000 data center with Microsoft 2000 DataCenter Server operating system and MS SQL Server 2000 RDBMS. The system should be equipped with 10 – 1.7 GHz CPUs and 40 GB of RAM to support all environments including fail-over. Approximate cost $300,000. Additional processors and memory would need to be purchased, as needed, to support non-PeopleSoft applications.

Production Fail-over Servers: Lucas County would need to purchase or modify existing hardware to provide two 4 X 500 MHz+, 8 GB RAM servers equipped with Microsoft 2000 DataCenterServer operating system and MS SQL Server 2000 RDBMS in the event of total ES 7000 failure. Approximate cost $50,000.

Existing Hardware: The hardware purchased for the existing Development system, including file server and disk arrays, will support the remainder of the PeopleSoft environments contemplated. RAM should be increased on these units to 8 GB.

Workstations: Data Processing should carefully evaluate existing user workstation to assure compliance with PeopleSoft minimum hardware requirements. Developer units should have Windows NT/2000 operating system and database connectivity software installed. Windows 98/NT/2000 operating system is supported for end-users. All users should be mandated to use Microsoft Internet Explorer 5.0 or 5.5. Heavy user and developer workstations need to be upgraded to 500 MHz+ processors to assure reasonable performance with minimum RAM of 128 Mb.

Security: Implement LDAP security, if 1) part of County plan for multiple application security, 2) self-service is to be implemented, or 3) LDAP security features are desired. Otherwise single application usage of LDAP is not reasonable.

Network: Current configuration is adequate.

Acuent believes that the Lucas County is presented with the opportunity of creating a world-class production system providing excellent performance, full redundancy, expandability and other features. This system could serve Lucas County well into the future and provide for future requirements changes in PeopleSoft. Acuent stands ready to assist Lucas County in its chosen

8.3 HRMS Patches/Fixes/Tax Upgrade Application

Deliverable

This document satisfies one of the key components of the Lucas County Pre-Implementation Planning and Preparations Scope document, dated February 2002, regarding the planned PeopleSoft Education & Government (E&G) 8.3 HR and 8.4 Financials implementation. This specific deliverable addressed the following:

Application of PeopleSoft Patches and Fixes **-** There will be a significant number of application patches and fixes that will need to be applied to the baseline PeopleSoft software that PeopleSoft will initially install. It is most preferable to be current with the application of these fixes at the start of the implementation to minimize software issues during the implementation process. Acuent will identify and install, given Lucas County's approval, all available post product patches, fixes and updates provided by PeopleSoft to bring the Lucas County environment in alignment with PeopleSoft's latest functional capability.

Complete List of Fixes and Patches Applied

Number	Name of Fix	Type	Posted Date	Date Applied	Prerequisites	D	Instr.	8	D Scripts	COBOL	SQR	SQL	P Code	Testing Required	D
1	R-GBERET-PR44L	Ben Admin	2001-11-30	***	None	HRDEMO	N/A	X							HP UNIX ONLY: BenAdmin (PSPBASCH, PSPBAENR) fails with "Error 114: Att
2	R-CFUNG-B775U	HRMS	2002-01-09	2002-05-07	None	HRDEMO		X	X	X	X	X	X		H A U D
3	R-LKUNZM-VQ59E	Payroll	2002-01-09	2002-05-07	None	HRDEMO		X					X		HRMS 8.3 E&G - Contract Pay - USA/CAN Contract Work Days process abend
4	R-LFOWLE-TA32M	Payroll	2002-01-09	2002-05-07	None	HRDEMO				X		X	X		Payroll for North American Post 8.3 Fixes
5	R-LFOWLE-V29CC	Time and Labor	2002-01-09	2002-05-07	None	HRDEMO		X		X		X			HRMS 8.3: TL 2002/Bundle #1 for the COBOL processes.
6	R-LFOWLE-2N4EN	Time and Labor	2002-01-10	2002-05-07	None	HRDEMO		X	X			X	X		HRMS 8.3: TL 2002/Bundle #2.
7		HRMS	2002-01-10	2002-05-07	None	HRDEMO		X				X			H P ng Cost - AE fails : ORA- 0 es
8	R-VFERBO-LU9EY	HRMS	2002-01-28	2002-05-07	None	HRDEMO		X	X		X	X	X		H d incident addresses issues w R ions.
9	R-JCARO-6S7G2	Ben Admin	2002-01-31	2002-05-07	None	HRDEMO		X	X	X	X	X	X		Suppression of Enrollment and Confirmation Forms
10	R-THANNU-P976N	Ben Admin	2002-02-08	2002-05-07	R-VFERBO-LU9EY	HRDEMO		X	X			X	X		HRMS eApplication Update 8.3 Bundle #1 2002
11	R-BSHAK-FR6RH	HRMS	2002-02-08	2002-05-07	R-THANNU-P976N	HRDEMO	0	X	X			X	X		H 2002 B
12	R-EDUFFY-S92LH	HRMS	2002-02-08	2002-05-07	R-THANNU-P976N	HRDEMO		X	X				X		HRMS 8.30: Accessibility, support for Section 508 of the Rehabilitation
13	R-PVEVER-Q88KS	Time and Labor	2002-02-12	2002-05-07	R-LFOWLE-2N4EN	HRDEMO		X	X	X		X	X		HRMS 8.3: TL 2002 Bundle #3.

14	R-TAX-855US	Payroll	2002-02-12	2002-05-07	None	HRDEMO		X	X	X	X	X	X		Payroll Tax Update 01-F for Release 8.3
15	R-THANNU-WS6HP	HRMS	2002-02-19	2002-05-07	R-VFERBO-LU9EY R-THANNU-P976N R-EDUFFY-S92LH	HRDEMO		X	X			X	X		HRMS eApplication Update 8.3 Bundle #2 2002
16	R-SCHUA-8D328	HRMS	2002-02-19	2002-05-07	None	HRDEMO		X							HRMS 8.3: Customer's licence code is correct for HRMS 8.3.
17	R-TAX-A93ZZ	Payroll	2002-02-26	2002-05-07	R-EDUFFY-S92LH	HRDEMO		X	X	X	X	X	X		Payroll Tax Update 01-G for Release 8.3
18	R-TAX-HL9QW	Payroll	2002-03-06	2002-05-07	Tax Update 01-G	HRDEMO		X	X	X	X	X	X		Payroll Tax Update 02-A for Release 8.3
19	R-PVEVER-2J99H	Time and Labor	2002-03-06	2002-05-07	R-PVEVER-Q88KS	HRDEMO		X	X	X		X	X		HRMS 8.3: TL 2002 Bundle #4.
20	R-TAX-VF897	Payroll	2002-03-13	2002-05-07	Tax Update 02-A	HRDEMO		X	X	X	X	X	X		Payroll Tax Update 02-B for Release 8.3***Case #1735737 T02B830U.dms Insert error
21	R-KGROFF-LB47M	HRMS	2002-03-21	2002-05-08	R-SHUA-8D328	HRDEMO		X	X						HRMS 8.3: Customer's licence code is correct for HRMS 8.3.
22	R-BTIMMO-4E77Y	Payroll	2002-03-26	2002-05-08	None	HRDEMO		X							Resident row is not created for new hire who lives and works in differ
23	R-SCHAPM-3Y5RL	Payroll	2002-03-26	***	None	HRDEMO	N/A	X							Kentucky SCUF ("Service Capacity Upgrade Fund") tax discontinued effec
24	R-JDELAW-ZN59M	HRMS	2002-03-27	2002-05-08	None	HRDEMO		X	X						HRMS 8 SP1and 8.3 - Position Management - Changes to REPORTS_TO field
25	R-GCLARK-T48ZQ	HRMS	2002-04-03	2002-05-08	None	HRDEMO		X			X				Component with Package Level = 'No Effect' affects the Total Employmen
26	R-CFUNG-CB4NH	HRMS	2002-04-03	2002-05-08	R-E -S92LH	HRDEMO		X			X	X	X		HRMS 8.3: E&G 2002 Bundle #1
27	R-CFUNG-4X22W	HRMS	2002-04-03	2002-05-08	R-CFUNG-B775U R-EDUFFY-S92LH	HRDEMO		X	X	X		X	X		HRMS 8.3: Commitment Accounting - 2002 Bundle #2
28	R-JABERC-UH6HU	HRMS	2002-04-04	2002-05-08	None	HRDEMO		X					X		HR 8.3: Unable to save Invite for Interview option in Select Applicant

29	R-MCANNA-9Z7G6	HRMS	2002-04-04	2002-05-08	R-VFERBO-LU9EY R-THANNU-P976N R-EDUFFY-S92LH	HRDEMO		X					X		HRMS8.x: Home > Self Service > Employee > Tasks > Hr Resume Add Emp (H
30	R-SCHUA-556KD	HRMS	2002-04-04	2002-05-08	R-VFERBO-LU9EY R-THANNU-P976N R-EDUFFY-S92LH R-THANNU-WS6HP	HRDEMO		X					X		HR8.3: Search for Applicants - Verity Search did not return any data
31	R-JABERC-KP544	HRMS	2002-04-04	2002-05-08	None	HRDEMO		X				X			HR 8.3: In Applicant Data when adding a new value, clicking on the mag
32	R-PUZAN-JS7EE	HRMS	2002-04-04	2002-05-08	R-VFERBO-LU9EY	HRDEMO		X					X		In 8.3 : Account ID do not accept letters. Receiving the following mes
33	R-SNEELE-CA268	HRMS	2002-04-04	2002-05-08	None	HRDEMO		X	X				X		HRMS 8.3 : US Social Security Number edit algorithm needs to be modifi
34	R-BSHAK-6P8CG	HRMS	2002-04-04	2002-05-08	R-VFERBO-LU9EY R-BSHAK-FR6RH	HRDEMO		X	X				X		HRMS 8.30 Plan Salaries: The system incorrectly allows entry of the Re
35	R-RBURNE-F74FU	HRMS	2002-04-04	2002-05-08	None	HRDEMO		X					X		HRMS 8.3 : Group Build does not always return rows when a query is use
36	R-RMACAP-JG4CP	Payroll	2002-04-04	2002-05-08	None	HRDEMO		X			X				QTD unemployment wage totals are overstated (doubled) on Tax810MA when
37	R-LFREEM-CN2HN	Payroll	2002-04-04	***	None	HRDEMO	N/A	X							CAN: Updated 2001 Tax Form Definitions/Footnote Data for New Customers
38	R-JPECOR-TJ3BP	Payroll	2002-04-04	2002-05-08	None	HRDEMO		X				X			E-Pay Header displays employee's name and company, but appears to show
39	R-PVEVER-PZ33C	Time and Labor	2002-04-04	2002-05-08	R-PVEVER-2J99H	HRDEMO		X	X	X		X	X		HRMS 8.3: TL 2002 Bundle # 5.
40	R-TAX-T74ZK	Payroll	2002-05-10	2002-05-14	Tax Update 02-B	HRDEMO		X	X	X	X	X	X		Payroll Tax Update 02-C for Release 8.3

	All Fixes are bundled in project APPL_FIXES_83														

Tax Updates

Number	Name of Fix	Type	Posted Date	Date Applied	Prerequisites	DataBase	Instr.	8 Project	DMS Scripts	COBOL	SQR	SQL	People Code	Testing Required	Description
1															
2															
3															
4															
5															
	The tax updates have been included in the payroll section of this document.														

Benefits

Number	Name of Fix	Type	Posted Date	Date	Prerequisites	DataBase	Instr.	8	DMS S	COBOL	SQR	SQL	People	Testing	Description
1	R-THANNU-P976N	Benefits	2002-02-08		None	HRDEMO		X							HRMS eApplication Update 8.3 Bundle #1 2002
2	R-EDUFFY-S92LH	Benefits	2002-02-08		None	HRDEMO		X							HRMS 8.30: Accessibility, support for Section 508 of the Rehabilitatio

Benefits Administration

Number	Name of Fix	Type	Posted Date	Date Applied	Prerequisites	DataBase	Instr.	8 Project	DMS Scripts	COBOL	SQR	SQL	People Code	Testing Required	Description
1	R-GBERET-PR44L	Ben Admin	2001-11-30		None	HRDEMO		X							HP UNIX ONLY: BenAdmin (PSPBASCH, PSPBAENR) fails with "Error 114: Att
2	R-JCARO-6S7G2	Ben Admin	2002-01-31		None	HRDEMO		X							Suppression of Enrollment and Confirmation Forms
3	R-THANNU-P976N	Ben Admin	2002-02-08		None	HRDEMO		X							HRMS eApplication Update 8.3 Bundle #1 2002
5	R-EDUFFY-S92LH	Ben Admin	2002-02-08		None	HRDEMO		X							HRMS 8.30: Accessibility, support for Section 508 of the Rehabilitatio

Human Resources

Number	Name of Fix	Type	Posted Date	Date Applied	Prerequisites	DataBase	Instr.	8 Project	DMS Scripts	COBOL	SQR	SQL	People Code	Testing Required	Description
1	R-CFUNG-B775U	HRMS	2002-01-09		None	HRDEMO		X							HRMS 8.3 Commitment Accounting Bundle #1 - Updates to the Retro Distribution functionality
2	R-PUZAN-ZK28F	HRMS	2002-01-10		None	HRDEMO		X							HR_TRNSALUP - Populate EE Training Cost - AE fails : ORA-00947: not enough values
3	R-VFERBO-LU9EY	HRMS	2002-01-28		None	HRDEMO		X							HRMS 8.3 - This bundled incident addresses issues within various Human Resources applications.
4	R-BSHAK-FR6RH	HRMS	2002-02-08		None	HRDEMO		X							HRMS 8.3: HR-A 2002 Bundle #2
5	R-EDUFFY-S92LH	HRMS	2002-02-08		None	HRDEMO		X							HRMS 8.30: Accessibility, support for Section 508 of the Rehabilitation
6	R-THANNU-WS6HP	HRMS	2002-02-19		None	HRDEMO		X							HRMS eApplication Update 8.3 Bundle #2 2002
7	R-SCHUA-8D328	HRMS	2002-02-19		None	HRDEMO		X							HRMS 8.3: Customer's licence code is correct for HRMS 8.3.
8	R-KGROFF-LB47M	HRMS	2002-03-21		None	HRDEMO		X							HRMS 8.3: Customer's licence code is correct for HRMS 8.3.
9	R-JDELAW-ZN59M	HRMS	2002-03-27		None	HRDEMO		X							HRMS 8 SP1and 8.3 - Position

															Management - Changes to REPORTS_TO field
10	R-GCLARK-T48ZQ	HRMS	2002-04-03		None	HRDEMO		X							Component with Package Level = 'No Effect' affects the Total Employmen
11	R-CFUNG-CB4NH	HRMS	2002-04-03		R-EDUFFY-S92LH	HRDEMO		X							HRMS 8.3: E&G 2002 Bundle #1
12	R-CFUNG-4X22W	HRMS	2002-04-03		R-CFUNG-B775U R-EDUFFY-S92LH	HRDEMO		X							HRMS 8.3: Commitment Accounting - 2002 Bundle #2
13	R-JABERC-UH6HU	HRMS	2002-04-04		None	HRDEMO		X							HR 8.3: Unable to save Invite for Interview option in Select Applicant
14	R-MCANNA-9Z7G6	HRMS	2002-04-04		None	HRDEMO		X							HRMS8.x: Home > Self Service > Employee > Tasks > Hr Resume Add Emp (H
15	R-SCHUA-556KD	HRMS	2002-04-04		None	HRDEMO		X							HR8.3: Search for Applicants - Verity Search did not return any data
16	R-JABERC-KP544	HRMS	2002-04-04		None	HRDEMO		X							HR 8.3: In Applicant Data when adding a new value, clicking on the mag
17	R-PUZAN-JS7EE	HRMS	2002-04-04		None	HRDEMO		X							In 8.3 : Account ID do not accept letters. Receiving the following mes
18	R-SNEELE-CA268	HRMS	2002-04-04		None	HRDEMO		X							HRMS 8.3 : US Social Security Number edit algorithm needs to be modifi
19	R-BSHAK-6P8CG	HRMS	2002-04-04		None	HRDEMO		X							HRMS 8.30 Plan Salaries: The system incorrectly allows entry of the Re

20	R-RBURNE-F74FU	HRMS	2002-04-04		None	HRDEMO		X							HRMS 8.3 : Group Build does not always return rows when a query is use

Time & Labor

Number	Name of Fix	Type	Posted Date	Date Applied	Prerequisites	DataBase	Instr.	8 Project	DMS Scripts	COBOL	SQR	SQL	People Code	Testing Required	Description
1	R-LFOWLE-V29CC	Time and Labor	2002-01-09		None	HRDEMO		X							HRMS 8.3: TL 2002/Bundle #1 for the COBOL processes.
2	R-LFOWLE-2N4EN	Time and Labor	2002-01-10		None	HRDEMO		X							HRMS 8.3: TL 2002/Bundle #2.
3	R-EDUFFY-S92LH	Time and Labor	2002-02-08		None	HRDEMO		X							HRMS 8.30: Accessibility, support for Section 508 of the Rehabilitation
4	R-PVEVER-Q88KS	Time and Labor	2002-02-12		None	HRDEMO		X							HRMS 8.3: TL 2002 Bundle #3.
5	R-PVEVER-2J99H	Time and Labor	2002-03-06		None	HRDEMO		X							HRMS 8.3: TL 2002 Bundle #4.
6	R-PVEVER-PZ33C	Time and Labor	2002-04-04		None	HRDEMO		X							HRMS 8.3: TL 2002 Bundle # 5.

Payroll

Number	Name of Fix	Type	Posted Date	Date Applied	Prerequisites	DataBase	Instr.	8 Project	DMS Scripts	COBOL	SQR	SQL	People Code	Testing Required	Description
1	R-CFUNG-B775U	Payroll	2002-01-09		None	HRDEMO									HRMS 8.3 Commitment Accounting Bundle #1 - Updates to the Retro Distri
2	R-LKUNZM-VQ59E	Payroll	2002-01-09		None	HRDEMO									HRMS 8.3 E&G - Contract Pay - USA/CAN Contract Work Days process abend
3	R-LFOWLE-TA32M	Payroll	2002-01-09		None	HRDEMO									Payroll for North American Post 8.3 Fixes
4	R-EDUFFY-S92LH	Payroll	2002-02-08		None	HRDEMO									HRMS 8.30: Accessibility, support for Section 508 of the Rehabilitatio
5	R-TAX-855US	Payroll	2002-02-12		None	HRDEMO									Payroll Tax Update 01-F for Release 8.3
6	R-TAX-A93ZZ	Payroll	2002-02-26		None	HRDEMO									Payroll Tax Update 01-G for Release 8.3
7	R-TAX-HL9QW	Payroll	2002-03-06		Tax Update 01-G	HRDEMO									Payroll Tax Update 02-A for Release 8.3
8	R-TAX-VF897	Payroll	2002-03-13		Tax Update 02-A	HRDEMO									Payroll Tax Update 02-B for Release 8.3
9	R-BTIMMO-4E77Y	Payroll	2002-03-26		None	HRDEMO									Resident row is not created for new hire who lives and works in differ
10	R-SCHAPM-3Y5RL	Payroll	2002-03-26		None	HRDEMO									Kentucky SCUF ("Service Capacity Upgrade Fund") tax

															discontinued effec
11	R-CFUNG-4X22W	Payroll	2002-04-03		R-CFUNG-B775U R-EDUFFY-S92LH	HRDEMO									HRMS 8.3: Commitment Accounting - 2002 Bundle #2
12	R-RMACAP-JG4CP	Payroll	2002-04-04		None	HRDEMO									QTD unemployment wage totals are overstated (doubled) on Tax810MA when
13	R-LFREEM-CN2HN	Payroll	2002-04-04		None	HRDEMO									CAN: Updated 2001 Tax Form Definitions/Footnote Data for New Customers
14	R-JPECOR-TJ3BP	Payroll	2002-04-04		None	HRDEMO									E-Pay Header displays employee's name and company, but appears to show
15	R-TAX-T74ZK	Payroll	2002-05-10		Tax Update 02-B	HRDEMO		X							Payroll Tax Update 02-C for Release 8.3